DECEMBER 1983
85p
Dm 5·80

COMPUTER & VIDEO GAMES



WIN
PHILIPS G7000's IN OUR GREAT TERRAHAWKS COMPETITION

WIN
STEVE DAVIS SNOOKER GAMES

PLUS
MANY FUN GAMES LISTINGS

WIN
10 ATARI VIDEO GAMES SYSTEMS IN OUR AMAZING ACTIVISION DECATHLON CONTEST

GAMES PLAYERS' GUIDE TO COMPUTERS

CONTENTS

DECEMBER 1983 Vol III No 3



Extra, extra . . .

Welcome to our wonderful Christmas issue! To help you get ready for the festive season we've included a bunch of exciting competitions and puzzles which will keep you busy until well after the last of the Christmas cake has been consumed.

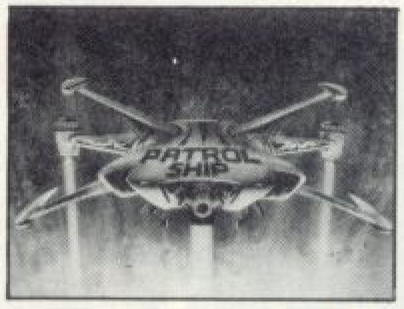
For those of you on the lookout for a new micro — or maybe you are buying your first machine — there's our Games Players' Guide. We look at micros old and new and give you our verdict from a gamers point of view.

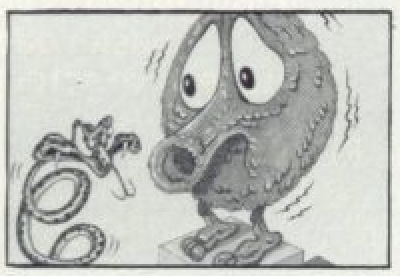
Once you've got a machine you'll need to know about software. So we've also included our top ten games for each machine — selected by our review team.

We also start a brand new series called Program Extra in which we talk to the people who write the games for each issue. We ask them about ideas, programming and modifications.

News & Reviews

Listings







Features

Editor Terry Pratt, **Assistant editor** Eugene Lacey, **Editorial assistant** Clare Edgeley, **Reader services** Robert Schifreen (01-278 3881), **Art editor** Linda Freeman, **Designer** Lynda Skerry, **Production editor** Tim Metcalfe, **Staff writers** Seamus St John, Richard Frankel, **Advertisement manager** Rita Lewis, **Assistant advertisement manager** Rob Cameron, **Advertising executive** Louise Matthews, **Advertisement assistant** Louise Flockhart, **Publisher** Tom Moloney

Editorial and advertisement offices: Durrant House, 8 Herbal Hill, London EC1R 5EJ; Telephone Editorial 01-278 6556, Advertising 01-278 6552

COMPUTER AND VIDEO GAMES POSTAL SUBSCRIPTION SERVICE. By using the special Postal Subscription Service, copies of COMPUTER AND VIDEO GAMES can be mailed direct from our offices each month to any address throughout the world. All subscription applications should be sent for processing to COMPUTER AND VIDEO GAMES (Subscription Department), Competition House, Farmdon Road, Market Harborough, Leicestershire. All orders should include the appropriate remittance made payable to COMPUTER AND VIDEO GAMES. Annual subscription rates (12 issues): UK and Eire £14. Additional service information including individual overseas airmail rates available upon request. Circulation Department: EMAP National Publications. Published and distributed by EMAP National Publications Ltd. Printed by Eden Fisher (Southend) Limited.

 ISSN 0261 3697.

Cover illustration: **Kathy Wyatt** Next issue: **December 16th**


TERMINAL SOFTWARE
commodore 64 games cassettes
SUPER SKRAMBLE!
Personal Computer News (15-21 Sept '83) gave SUPER SKRAMBLE! an overall rating of NINETEEN OUT OF TWENTY and described it as: "Well implemented with beautifully smooth scrolling and very nice graphics."
SUPER GRIDDER
". . . a compelling piece of frivolity that could give hours of fun." was the verdict of Personal Computer News (22-28 Sept '83).
SUPER SKRAMBLE!
"An excellent game" said Computer & Video Games magazine (Sept '83).
TERMINAL
SUPER DOGFIGHT
The first 64 games cassette to have SIMULTANEOUS TWO-PLAYER ACTION – realistic sound effects too.
STELLAR DODGER
A game of skill and anticipation in which you must dodge your way through asteroids to complete your mission.
NEW
NEW
HUNTER
A fast action game in which your pursuers gain in speed and intelligence as you master each successive screen.
sinclair Spectrum 48k
VAMPIRE VILLAGE and SPACE ISLAND are REAL-TIME graphic adventures and every game is different from the one before.
CITY is a unique REAL-TIME better-than-a-board game for 1-4 players that combines simplicity of use with complexity of form as the city you build takes on a life of its own.
SELECTED PROGRAMS AVAILABLE IN:
Dixons SOFTWARE EXPRESS
Greenchip at DEBENHAMS
LASKYS
TERMINAL SOFTWARE
28 CHURCH LANE, PRESTWICH, MANCHESTER M25 5AJ
TEL 061 773 9313
PRINCIPAL WHOLESALE DISTRIBUTORS:
PCS BLACKBURN, CentreSoft WEST MIDLANDS
SoftShop LONDON
EUROPE:
WICOSOFT – DUSSELDORF
TIAL – ALMHULT
AASHIMA – ROTTERDAM



Please drop us a line at: Computer and Video Games, EMAP, Durrant House, 8 Herbal Hill, London EC1R 5JB.

THE NEW DIMENSION

Dear Sir,
I would like to congratulate you on an excellent magazine, especially with October's 3-D software and drawings.

I am writing about S. Nightingale's letter in Mailbag. When I purchased my Vic-20 back in March, 1983 it worked perfectly for about a month and a half, then the sound went funny and the picture was difficult to tune. I found that the problem lay in the cable between the modulator box and the computer.

Keep up with the excellent Vic-20 games and software reviews.
David J. Richards,
Beccles,
Suffolk.

HOME FOR A LYNX?

Dear Sir,
I have now saved up enough money to buy a computer. I have £300 and am currently looking at the new Lynx. Would you please answer the following questions. Does the computer have sound? Is there much arcade software for the machine? And finally is there a specialist magazine for this computer?
Martin Parry,
Market Harborough,
Leicestershire.

Editor's reply: Yes, the Lynx does have sound. Its capabilities are very similar to most other systems on the market that use the same chip i.e. the Dragon and Colour Genie.

But, you must bear in mind that there is very little software available at the moment. Some Adventure type games have appeared, but little else to shout about. You won't really see much until the New Year if previous computer introductions are anything to go by.

No magazine yet either — although at the rate mags keep appearing and disappearing there may be by the time this letter is printed. However a National User Group has just been set up. Contact: Robert Poat, 53 Kingswood Avenue, Sanderstead, South Croydon.

QUESTION MASTER!

Dear Sir,
I am writing to ask you a few questions about my Pet.

1) On my Pet 4032, how do I interface it to the TV? Through the user port? I have tried and failed.

2) I have found a bug in Pet's DOS, I somehow saved a program under the name "'". I cannot load or scratch it from my disc, is there any way of doing either of these things?

3) Where can I get a NPN 2N2222A transistor for an interface circuit? In my magazine it says I can get one from Tandy but they don't seem to have any.

4) If I bought an acoustic coupler, could I make my Pet talk to someone else's Pet without some special complicated hardware?

5) How do I PEEK the user port so I can make a joystick?
D. Pym and R. Pereira,
Flaunden,
Herts.

Editor's reply: 1) You need a special adapter to pick up the video signals. These cost about £40.00 and can be obtained from a number of places. Try: Small Systems Engineering Ltd, 2-4 Canfield Place, London, NW6.

2) Still trying to find out!

3) Try Technomatics in Edgware Road, London.

4) You'll need some



software — but that should be sold as part of the acoustic coupler package.

5) This can be achieved through Basic by addressing one of the I/O ports on the 6522 chip. It's not as complicated as it seems, and many circuits have been published in the specialist Commodore magazines.

ARCADIA UPSETS

Dear Sir,
In the October issue of *C&VG* I was disappointed to see that my high-score on Vic Arcadia, which is higher than two printed, wasn't mentioned. However, I understand that you probably didn't receive it in time, but what really upset me was the way Spectrum and Vic Arcadia were grouped together.

These are really two different games, the Spectrum version has more levels and a key that can halt the game while you rest your fingers. The Vic version doesn't have this feature so I think it is unfair to compare the scores between them.

Also as I don't know which machine the five listed scores have been achieved on I don't know what my target is.
Colin Lenox,
Sunderland,
Tyne & Wear.

Editor's reply: You've got a good point Colin. In future we'll be asking competitors in our Hall of Fame which machine they used when playing Arcadia and also tell you which is which in the scores section.

ALAS, POOR OLD ORIC!

Dear Sir,
I own a 48k Oric and am writing to complain about lack of games for the Oric in *C&VG*.

When the Snakes program was published in the June issue, I, and I'm quite sure a few other Oric owners thought there would be more games soon.

C&VG is turning into a Vic and Spectrum owners magazine with all the games and features published for them. Please realise there are special magazines for Vic, BBC, Spectrum and ZX81 owners, and none for the Oric apart from the highly overpriced Oric Owner from Tansoft.

I'm sure Oric programs come into your office, and I'm sure if you printed some of them, other people would send in theirs.

Please could you tell me if there are going to be any games or features for the Oric soon. Finally, how about having a Hints and Tips page in which owners send in tips for their machines.
Paul Mansbridge,
Brighton,
East Sussex.

Editor's reply: At the moment we have NO Oric programs suitable for publishing Paul, so if you would like to send some in we would be happy to review them. That applies to all you Oric owners out there.

As for the Hints and Tips page — we feature these on our Bug Hunter page each month.

And we think that if you look at the magazine you'll find more than just Vic and Spectrum programs!



MAILBAG



FOREIGN POLICY?

Dear Sir,
Replying to the questions posed by the Dragon 32 advert in the September 1983 (page 21): Yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, yes, no, yes, no. And the machine I'm talking about is the Commodore 64!

The 64 may be more expensive but it has a bigger graphic screen, sprites and CP/M option. The 6510 microprocessor can access more than 64k and the user can switch memory.

Now that there is a lot of software being written in Britain for the 64, I would like to know what guarantee I have against damages during postage. The reason I'm considering buying British software is that the local dealers consider the 64 as a business machine and thus stock only business software and simple kiddies' games.

I've been reading *C&VG* for nearly a year now and I consider it a very exceptional magazine despite the 10p (M$0.35) rise in price. My only grouse is that it arrives here one month late each time and makes it impossible to enter any of the contests. How about starting a pen-pal column so that we can contact other video gamers?

Soh Kam Hung,
Perak,
Penninsula Malaysia.

Editor's reply: Well, if anyone wants to contact Soh Kam Hung, write to us and we'll pass your letters on to him in Malaysia.

SOFTWARE ENTERPRISE

Dear Sir,
I have just left school with several "O" levels including Grade A in computer sciences.

Knowing the potential of the software industries a few friends and I are thinking of setting up a software house as a job.

I wondered if you could give us any advice as to how to go about setting up the company and what we have to do.

We have several programmers and an artist, so we have several good employees already.

U Henros,
Maidenhead,
Berks.

Editor's reply: A good first move would be to contact the Computer Retailers Association which should be able to give you the information you need to get started in this very competitive area. You can contact them at 1 Buckhurst Road, Bexhill-on-Sea, East Sussex.

PLUGGING THE VIC

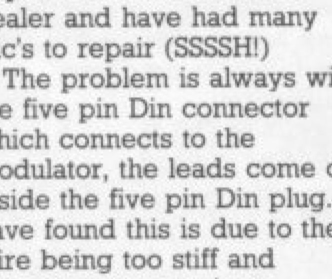
Dear Sir,
In response to Stuart Nightingale's letter in mailbag concerning Vic-20 problems.

I work in a service department for a national dealer and have had many Vic's to repair (SSSSH!)

The problem is always with the five pin Din connector which connects to the modulator, the leads come off inside the five pin Din plug. I have found this is due to the wire being too stiff and movement causes it to become loose and eventually fall off. I cure this by fitting a more flexible type of four way screened wire.

I have enclosed the wiring details below. If the yellow wire comes off then the sound goes, the red wire when it comes off usually short circuits to the screen and this being the power supply to the modulator causes the fuse inside the console to blow.

G. Westerman,
Rochdale,
Lancs.



A Red (+VE)
B Screen lead
C Transparent (video) lead view from rear
D Yellow (sound)

MORE HARD TIMES . . .

Dear Sir,
I am writing in reply to Stewart Nightingale's letter in October's edition of your magazine.

I was given a Vic-20 For Christmas last year. After two months it went wrong. The keyboard completely packed up. I instantly took it back to the shop where it was bought. After a couple of weeks it was returned. I gained two or three months of happy programming, but then the sound went and again returned to the shop. After a further four weeks I got my machine back this time I only had a month of programming.

On this occasion the television kept on scrolling and the keyboard did not function properly. This time it was away for two months and only after persistent calls to the shop did I get a brand new computer.

I am glad to report that I have had no trouble so far with this computer.

John Cure,
Romford,
Essex.

MODEMS FOR THE DRAGON?

Dear Sir,
I have been looking through your magazine and saw adverts for modems for the Spectrum, and also an ad for Micronet 800. I did not see any mention of a modem for the Dragon 32. Please could you tell me if there is a modem available for the Dragon, or if I could use a modem from another computer if I bought an interface.

Brian Raltery,
Sligo,
Ireland.

Editor's reply: Micronet is currently available for the BBC B, Spectrum, Apple II and IIe, Tandy TRS80 models I and III and Pet 3000, 4000 and 8000 series. Link up for the Atari and Dragon is being considered, but nothing definite has been decided yet.

Modems are fairly standard pieces of hardware; it is only the interface which needs to be changed according to the computer being used. However, I do not know of any modems currently available for the Dragon. More information from Micronet 800 on 01-278 3143.

JET PAC PROBLEMS

Dear Sir,
Your Hall of Fame competition is a great idea, but Jet Pac should be excluded from this competition because it has a bug!

On the fourth sheet of Jet Pac there are plane-shaped objects which explode and give points. If the Jetman is positioned on the top right hand cloud, he cannot be killed.

Therefore the television can be switched off and the computer left running and your score will still be increasing. So if left long enough any score can be reached without touching the keyboard or joystick.

R. Harris,
Braintree,
Essex.

Editor's reply: You are quite correct, Mr. Harris. If you leave the Jetman alone, your score increases by 55 points each time a plane hits the ground. Ultimate say, that this should not happen, and will replace your cassette if you return it.

C&VG REVIEWERS

Many thanks to everyone who wrote in offering to review software for the magazine. We have been swamped with replies! We're afraid we can't write back to you all individually but your names will be kept on our files.


ONLY
£5.50
SPECTRUM
Jumping Jack
ATARI
Leggit!
Atari and Spectrum owners!
On the bounce for something different?
It's the zaniest, craziest, fun-packed experience yet, twenty hazard-filled levels – screens full of screams!
Leggit down to W.H. Smiths, John Menzies, Boots or one of our dealers nationwide and find out why Jumping Jack/Leggit will make you cry with laughter.
Imagine
..the name of the game
5 Sir Thomas Street
Liverpool, Merseyside L1 6BW
Dealer Enquiries Contact:
Colin Stokes on 051-236 8100 (20 lines)

As your childr
so can your



600XL Home Computer.

If you're buying a home computer then you've probably got one major worry. That your children will soon grow out of the system you buy.

With the new ATARI 600XL™ you need have no such fear. Because the ATARI 600XL was not just designed as a home computer, it's designed to build into a complete computer system.

As your children's knowledge of computers increases, so can their home computer, simply by adding any of these extras which will be available soon.

Program Recorder. The inexpensive way to store extra programs, and use the unique Atari sound-through system.

64K Memory Module. Increase the memory from 16K RAM to a massive 64K RAM. Important, as the more memory it has the more it can do.

Touch Tablet. Creates complex on-screen graphics by allowing you to draw on the TV screen.

Trak Ball™ Controller. For a better and more sophisticated arcade style game control.

en get bigger
Atari 600XL.



Program Recorder.



64K Memory Module.



Touch Tablet.



Trak Ball™ Controller.



Super Joysticks.



Colour Printer.



Disk Drive.



80 Column Dot Matrix Printer.



Letter Quality Printer.

Super Joysticks. Gives you a greater competitive edge over your games.

Colour Printer. You can print out your own four colour electronic designs and programs.

Dual Density Disk Drive. Increases your capability by giving you fast access to data, as well as an efficient expanded storage system.

80-Column Dot Matrix Printer. This is for more complex applications with fast telex style print-outs.

Letter Quality Printer. Changes your computer into a sophisticated word processor, producing as many top quality prints as you want.

Of course, you won't need them all now. Your children have first got to learn to master the computer itself. But when they have, and believe us they will, the ATARI 600XL can handle it.

For more details write to: Atari International (UK) Inc., P.O. Box 407, Blackhorse Road, London SE8 5JH.

The new Atari XL home computer system.

ATARI®


HOW TO MAKE A RED DEVIL SEE RED
with accurate control from Suncom
SLIK STIK
TAC·2
Starfighter
THE ULTIMATE JOYSTICK
FIRE
RAPID
FIRE
Suncom
JOY-SENSOR
JOYSTICK SIMULATOR
Beating the game requires positive response and fast accurate control.
That's why beating the game requires Suncom from Consumer Electronics.
A range of 3 quality joysticks all with arcade-style features plus Joy Sensor, the ultimate, with precision, touch-sensitive control.
No stick to move, no resistance to movement.
Together with a range of C.E.L. Adaptor leads, they're compatible to a wide range of machines.
Check them out at your dealer– they're sure fire winners.
For details of your nearest stockist contact–Consumer Electronics Limited, Failsworth, Manchester M35 0HS. Tel: 061-682 2339.
Suncom
from Consumer Electronics.
Compatible with
Atari CX2600 Game System*
Atari Personal Computer Systems*
Commodore 64 & Vic 20 Computers*
An adaptor (sold separately) is available for Texas Instruments TI 99/4A Computer*
Adaptor Model No. 11060
*These are the registered Trade Marks of the individual companies concerned.

The SHIVA Christmas Selection



For the BBC Micro:

Easy Programming for the BBC Micro
Eric Deeson £5.95

Further Programming for the BBC Micro
Alan Thomas £5.95

NEW **BBC Micro Assembly Language**
Bruce Smith £7.95

For the Dragon 32:

Easy Programming for the Dragon 32
Ian Stewart & Robin Jones £5.95

Further Programming for the Dragon 32
Ian Stewart & Robin Jones £5.95

For the Oric-1:

NEW **Easy Programming for the Oric-1**
Ian Stewart & Robin Jones £5.95

NEW **Games to Play on Your Oric-1**
Czes Kosniowski £4.95

For the Commodore 64:

NEW **Easy Programming for the Commodore 64**
Ian Stewart & Robin Jones £6.95

For all Computer Enthusiasts:

NEW **Computing: A Bug's Eye View**
Cosgrove £2.95

Brainteasers for BASIC Computers
Gordon Lee £4.95

For the Spectrum:

Easy Programming for the Spectrum
Ian Stewart & Robin Jones £5.95

Further Programming for the Spectrum
Ian Stewart & Robin Jones £5.95

Spectrum Machine Code
Ian Stewart & Robin Jones £5.95

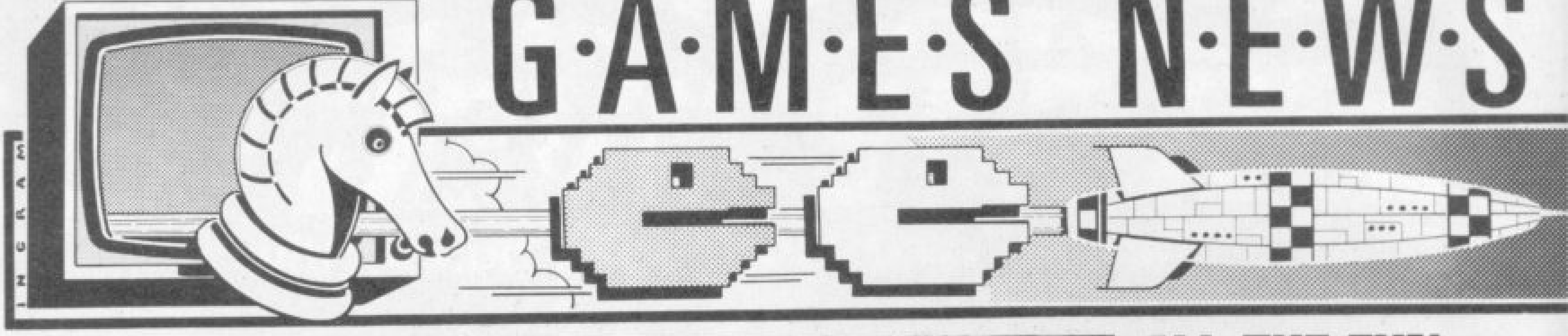
Games to Play on your Spectrum
Martin Wren-Hilton £1.95

Spectrum Special 1,2 & 3
Three cassettes, each of 10 games and puzzles programs.
Ian Stewart & Robin Jones £5.95 each

Shiva Publishing Limited

4 Church Lane, Nantwich, Cheshire CW5 5RQ England
Tel: (0270) 628272 Telex: 367258 (GASEQP)

G·A·M·E·S N·E·W·S



SALLY TAKES ON THE COWBOYS

SALOON SALLY

Saloon Sally is the new heroine of the Wild West dodging brawling cowboys and collecting the loot.

All the action takes place to the accompaniment of a zany piano tune which speeds up to match the action ending in a thundering crescendo. Saloon Sally is Psion's first game for the BBC model B.

The premier Sinclair software writers already have hit games under their belt in the shape of Flight Simulation and Scrabble.

Saloon Sally is in the shops now at £7.95 available from W. H. Smith and other software stockists.

SHOW WITH A MAGIC MISSION

MICRO MISSION

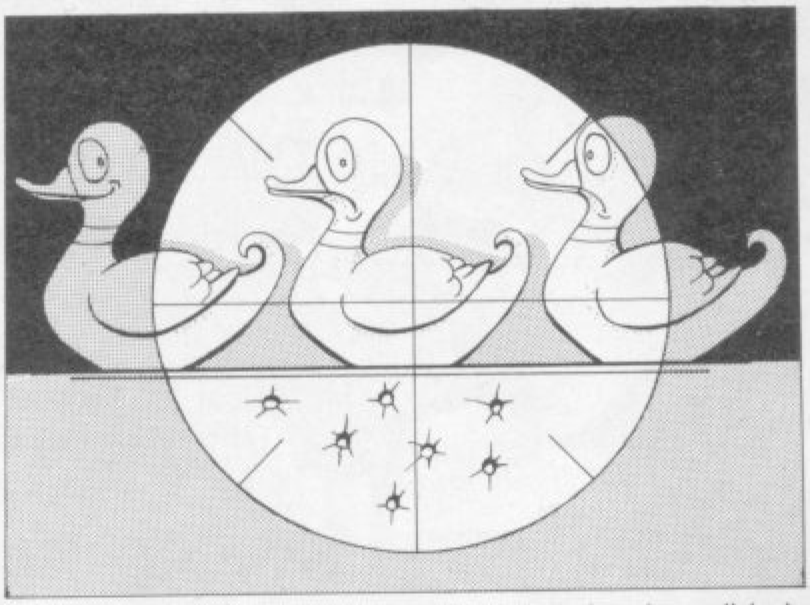
From Wednesday, November 9 Central TV will be broadcasting from the far ends of the universe, from a space ship some 5,000 light years from Earth.

The Magic Micro Mission is a new series for young people that explores the realms of computer technology and seeks out the latest developments in computer games and applications. Central say the show will be packed with fun, jokes, colour and costumes as the ship continues on its quest, commanded by its somewhat weird Beano-reading Captain. Already it has been dubbed "the technological Tiswas".

The Magic Micro Mission will aim to demystify computers. Jargon Gobbler will explain computer terms like RAM and ROM, PEEK and POKE in simple language.

Particular emphasis will be placed on the avalanche of new computer games coming into the shops in time for Christmas. Each week a group of five children will road-test a range of computer hardware and software and report back on their findings. In addition the *Mission* will investigate robots in both the home and in industry.

The Magic Micro Mission will be crewed by two presenters plus a computer expert Dr John Barker, Lecturer in Physics at the University of Warwick. There will also be Silicon Superstars from the worlds of entertainment and sport who have discovered the jobs of computing.



GREATEST GAME UNDER THE BUN?

MR WIMPY

It's the greatest game under the bun! So say the authors of Mr Wimpy, the latest computer game from Ocean Software.

In screen one, our intrepid chef has to assemble the ingredients for his burgers while at the same time keeping a wary eye on Waldo the burger-thief who keeps trying to steal whole trays of buns. Watch out for the moving manholes which appear at random or it's curtains for Mr Wimpy.

In following screens, the ingredients are placed tantalisingly on different levels and platforms. A harassed Mr Wimpy has to chase round putting the burgers together while at the same time avoiding the murderous instincts of various edible baddies.

As Mr Wimpy runs over the ingredients they drop down a level, pushing the ingredient below down a level until a whole burger is assembled at the bottom of the screen. If the pursuing baddies come too close, Mr Wimpy can always use his petter shaker to put them off the scent. Blasting them with a fist full of petter will put them out of action for a while, but if he gets cornered he'll lose a life.

On reaching the final screen, the game reverts back to screen two, carrying forward your hi-score, only this time things become more difficult. Points are awarded for assembling burgers and collecting bonus gems, cartons of ice cream and the odd cup of coffee which are dotted around the screen.

Wimpey. An interesting development here is the link between the game and the Wimpy burger chain. The cassette has the Wimpy trademark emblazoned on the inlay. Is this the start of a new wave of games with sponsors?

Mr Wimpy is controlled by either keyboard or joystick and is available from Manchester-based Ocean Software for the Spectrum 48k at £5.90.

ALL THE FUN OF THE FAIR WITH DUCKS

CAROUSEL

Now you can enjoy all the fun of the fairground without leaving your armchair. Carousel is a shoot-em-up game with a difference — flying ducks that is!

The game is a computer version of the shooting galleries found around fairs but with lots of added features.

You start the game with a limited supply of bullets which you must use carefully to shoot ducks, owls and assorted letters of the alphabet.

Carousel is for the BBC micro and will be available around Christmas from Cambridge-based Acornsoft with a price tag of £9.95.

SIMPLE WAY TO CREATE GOOD GAMES

SCOPE

If you are trying to write a fast arcade game on the Spectrum then you can rule out Sinclair Basic.

You may like to try Scope. This is a new programming language available on cassette for a 48k machine and is, says its author, designed for writing fast arcade style games.

Scope stands for Simple Compilation Of Plain English, which gives a clue as to why programs written with it run so fast. It is a compiler, which means that when you have written your program, it is translated entirely into machine code before running. This allows an inexperienced programmer to turn out quality games.

If you think that this is a good idea, then you can buy a copy from you local Smiths'. It costs £11.95.

Illustration by Dorian Cross

G·A·M·E·S N·E·W·S



CATCH A FALLING NUGGET!

GOLD RUSH

Calling all gold diggers! Strike it rich on your Spectrum.

California isn't the venue, but an exotic gold laden planet called Oron.

Working the mines of Oron is a difficult and dangerous job, the mines consist of huge bottomless caverns. The gold, which falls from the roof of the cave can only be collected in two buckets.

But these can't be moved, so you have to build a series of ledges to knock the falling nuggets in the directions of the suspended buckets.

But nothing is ever this easy and the game includes the inevitable host of alien meanies who generally give you a hard time, getting in your way and eating the odd careless miner.

Gold Rush will be released in November for the 16k Spectrum and includes joystick and keyboard control options. The game is produced by Thorn EMI and will cost £6.95.

THE WEBBED WONDER IN THE SWIM!

AQUAMAN

Never fear — Aquaman is here! But can he save Neptune's daughters?

The Old Man of the Sea's daughters have been kidnapped and imprisoned in glass cases, each one guarded by a venemous sea serpent. Set in the deeps, fathoms below the surface, it is your job as Aquaman to rescue them.

Your search for the lost daughters will lead you through a deserted underwater city and through various murky caverns where killer crabs, octopuses lurk — and the all important oxygen carrying amoebae live!

Aquaman must collect these to replenish his ever dwindling supplies. Finally, after blasting all the amoebae, Aquaman must battle against an army of crabs.

At last he arrives in a cavern in which the captured daughter is languishing, guarded by a hissing serpent. The only way to get past this deadly obstacle is to swim back to the crabs which are littering the ocean floor, collect them and feed them to the viper. This will poison it and Neptune's daughter can be released and escorted to her Dad's palace.

Once there Aquaman's quest starts all over again and rescuing the next daughter is a far more arduous task!

Neptune's Daughters runs on a Commodore 64 with joystick control and is available from Manchester based English Software for £9.95.

THE LIGHT FANTASTIC SHOTGUN!

LIGHT RIFLE

If fairground shooting games always seem to lack a little something on your computer then Stack Computers of Liverpool have now come up with that extra ingredient.

The Stack light rifle brings the real feel of the shooting range to your micro.

Compatible with six games also supplied by Stack you can go on a Big Game Safari, pot some grouse in the Glorious Twelfth, do what a man's got to do in High Noon, shoot at the crows in Crow shoot, as well as Rats and Cats and Escape from Alcatraz.

The rifle itself disassembles to make a hand gun for use in close combat games like High Noon.

The rifle is due to be launched at the Northern Computer Fair in two weeks' time and will cost £29.95.



DESIGNER OF THE MONTH

NAME: Jeff Minter.

GAMES: Gridrunner, Attack of the Mutant Camels, Hovver Bovver, and coming soon Revenge of the Mutant Camels.

BORN: Reading, Berkshire in 1961.

COMPUTER HISTORY: Jeff learned Basic on the school Pet although was not considered the local computer whizz being denied a place on the computing course. He was not the school dunce either earning A levels in Physics, English, Maths and a university place. The academic life did not suit Jeff and he found himself carpeted by his tutor. A change of college and of courses followed soon after.

It was during his time at college number two — Oxford Polytechnic — that Jeff bought a Vic-20 and learned machine code. Looking at the software available Jeff was convinced he could do better and set out to write a copy of the arcade game Defender on his Vic. Encouraged by demand for his game Jeff wrote another one — Traxx — and took them both to the Barbican show where they sold well.

Now there was no looking back — and Llamasoft was born — named after his favourite animals.

Jeff describes the business as a small family firm "just me and my mum".

The game that really made Minter's name is Gridrunner — a super fast shoot 'em up — which is selling well in the US as well as in Britain, having knocked Choplifter off the number one slot in the American charts earlier in the year.

FAVOURITE FOOD: Liver sausage sandwiches, burgers, and most junk foods.

FAVOURITE DRINKS: Coke, Guinness, and wine.

FAVOURITE TV PROGRAMME: Not the Nine O'Clock News.

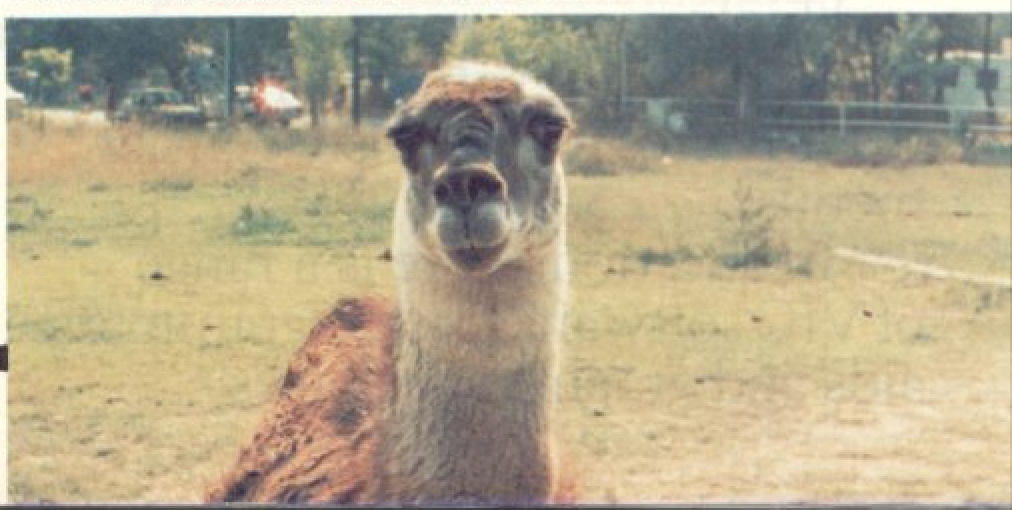
FAVOURITE COMPUTER PROGRAMS: Hovver Bovver, Repton, Stix.

COUNTRIES VISITED: America, France, Spain.

PETS: Two Siamese cats and an Afghan hound called Woody.

AMBITIONS: To write better and better games.

FAVOURITE POP GROUPS: Pink Floyd, Genesis.



Let Commodore expand your horizons.

VIC 20 is the finest home computer that money can buy.

And the better you get to know it, the more confident, adventurous and ambitious you'll become.

You'll want to take advantage of the vast range of VIC software: a superb and constantly-growing selection of programs, embracing business systems, entertainment, education and many applications in the home.

Every program in the series has been designed by experts, and chosen for its quality and value for money.

VIC business software covers a wide range of applications, including spread-sheet analysis, stock control, information handling and word-processing.

A mind-blowing range of games including Scott Adams' world-famous 'Adventure' series.

Advanced space games, including the sophisticated 'Omega Race'.

Learn subjects as diverse as English Language, programming, and biology.

And 'home' software ranges from IQ tests to Robert Carrier menus.

In addition, there is a range of VIC software, like programmers' aids and graphics packages–



to add to your understanding and enjoyment of computers and computing.

There's even a special 'VicSoft' Club for VIC 20 enthusiasts, with many advantages including special offers to club members.



VIC software will expand your horizons. And your mind.

PRICES RANGE FROM £4.99 to £24.95 INC. VAT.

commodore
VIC 20

For more information, a catalogue of VIC software and details of your local retailers or dealers, please phone or complete the coupon and send to:
The Commodore Information Centre,
675 Ajax Avenue, Slough, Berkshire SL1 4BG.
Telephone: Slough (0753) 79292.

Name
(MR./MRS./MISS)
Address

Postcode

VCCVG 1283

G·A·M·E·S N·E·W·S



MACK THE MECHANIC DROPS IN

MECHANIC

Mack the mechanic is much in demand in this game to repair your war battered helicopter.

Fly your chopper over mountainous terrain protecting the tanker in the bay from a bombardment of missiles fired by enemy subs.

Every time the tanker sustains a direct hit, members of the crew jump into the water to swim to the shore. You have to pick them up before they drown.

Once safely aboard fly the shivering crew back to base and deposit them in the army huts. Get Mack the mechanic to check your chopper for damage and fuel supplies.

As if this were not enough to keep you busy, one of the mountains on the island is about to erupt into a fierce volcano.

Krakatoa is the latest 48k Spectrum game from Abbex Software. Available from the London based firm now at £5.95.

Also new from Abbex this month is a Flight Simulation program for the Commodore 64. Complete with no less than nine flight controls you must take off, fly around a path of beacons and land safely again. Flight Simulation costs £6.95.

LESSON IN WARTIME STRATEGY

KNIGHTS

If someone mentions desert rats to you and you think of gerbils, then you may benefit from the history lesson contained in this latest war simulation called Knights of the Desert.

The game takes you back to the height of World War II. The brilliant German general Rommel is pushing his Panzer divisions further and further into North Africa.

You play the part of Montgomery — Monty to the men who served under him — commanding British forces with the objective of pushing the enemy back towards the North African coast and capturing key towns such as Tobruk and Benghazi.

You can select a two player game where you command either the German forces (whose campaign is hindered by supply shortages) or the British forces (who must contend with the swiftness of the Panzer units and low morale).

The solo option the computer only directs the British forces. The game is the work of the American strategic games experts — Strategic Simulations Inc — and is imported to the UK by Centresoft of Birmingham.

Running on the Atari 400/800, Commodore 64 and Apple II it will set you back £29.95.

BEE WITH A VERY SWEET TOOTH!

BIRDS AND BEES

Knowing about the birds and the bees won't help you in this game! You play the part of a single minded bee whose one aim in life is to fill his hive with honey.

Flitting around from flower to flower happily collecting nectar he is suddenly attacked by all sorts of nasty insects who think he'll make a great hors d'oeuvres!

Your poor bee has got to avoid birds, spiders, caterpillars and make it safely back to the hive with his cargo of nector. Should he get caught in a spider's web, he'll die — and watch out for the wandering teddy bear.

Scrolling from left to right, the game becomes steadily more difficult as the further you are from home the more nasties there are to contend with and some rapid evasive action will be necessary to get back safely.

Beware of overloading him with nectar — this will slow him down and he's more likely to get caught wobbling home than speeding back to base.

Optional use of the Currah Speech Synthesiser is available with the Birds and the Bees which will say "Nectar" to you every time some is collected and will also tell you when you've lost one of your three lives.

You can play the game using a joystick or keyboard and it runs on a 48K Spectrum and is available from Bug-Byte at £5.95.

Also new from Bug-Byte is a graphical adventure game incorporating some 170 screens of different pictures.

In the valley live two kings, one good and one evil. The aim of the game is to steal a treasure chest from the evil king and give it to the good king. In your quest there is the odd dragon to kill and princess to rescue and help is on hand from bands of Elves — but beware — danger lurks in the guise of the Terrible Trolls.

Twin Kingdom Valley is available for the BBC and Electron for £9.50 and the Commodore 64 after November for around the same price.

DENNIS IN THE LAND OF HORRORS

DENNIS

The world's most hen-pecked husband has been immortalised on computer.

Husband of the Prime Minister, Dennis Thatcher stars in a new adventure called Dennis Through the Drinking Glass.

Your job is to guide Dennis through the world of politics helping him to avoid the horrors who haunt the corridors of power, as Dennis attempts to reach the sanctuary of the Gravediggers Arms.

All the scenes in the adventure are introduced in rhyming verse. The game package comes with caricatures of the main characters and a poem.

Ken Livingstone, Sir Keith Joseph and Norman Tebbit are included and, of course, Iron Lady makes an appearance.

Dennis Through the Drinking Glass will be available in early November for the 48k Spectrum from Applications Software costing £5.50.



Illustration: Dorian Cross

Italian worker ends up in cement.



'Mario's Cement Factory' is the latest wide-screen adventure from Game & Watch, with 2 skill levels and (for super ace show-offs) a memory that remembers and keeps your highest score.

The game even incudes a quartz clock display and alarm (that's why they call it "Game & Watch").

Get it from your games shop now – and save Mario's mates from a concrete overcoat!

Mamma mia! Can Mario, the hero of Donkey Kong, survive in the world's wildest cement works?

Racing from floor to floor, leaping across unguarded lift shafts, Mario has to release cement hoppers before they overflow and engulf the truck drivers below.

The hoppers fill faster and faster as Mario's score mounts up – skilful players can win more lives, but one false move and it's finito!



THE MOST FUN YOU CAN GET IN YOUR POCKET.

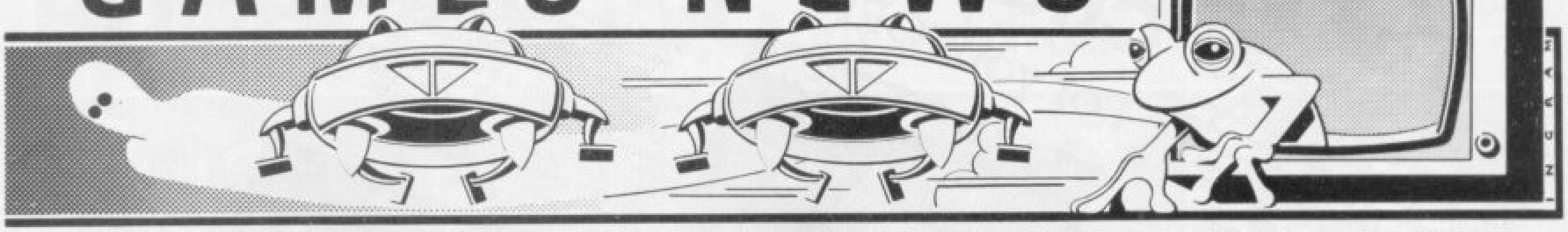
GAME & WATCH

CGL. CGL HOUSE, GOLDINGS HILL, LOUGHTON, ESSEX IG10 2RR

CGL

MARIO'S CEMENT FACTORY IS JUST ONE IN THE FASCINATING SERIES OF GAME AND WATCH FROM CGL. SEE THEM NOW AT BOOTS, DIXONS, JOHN MENZIES, W.H. SMITH, TOYMASTER, HAMLEYS, JOHN LEWIS PARTNERSHIP, SELFRIDGES AND OTHER LEADING STORES AND GOOD TOY SHOPS.

G·A·M·E·S N·E·W·S



WHO WANTS TO BE A MILLIONAIRE?

MICROPOOLS

If you are tired of people telling you that micros are great fun for playing games but have few other uses then we now have the argument to nail that cynical view for all time.

This latest software package can help you and your computer win the football pools.

According to the program's manufacturers Micropools makes better forecasts of football match scores than the predictions that appear in the national newspapers.

The cassette comes complete with a user manual which contains step by step instructions on how to get the best forecasts.

Micropools is the brain child of Spencer Software of West Sussex.

The game is available now at £7.95 for the 48k Spectrum, BBC B, Commodore 64, Commodore Pet, Newbrain and the Dragon.

Should any of you *C&VG* readers win a million with this program then don't forget where you read it first. Any donations will be gratefully received!

£10,000 IS STILL ON OFFER!

KRAKIT

Still no winner in the £10,000 Krakit game from Artic computing.

The game attracted widespread publicity in the computer press last year when the firm announced that £10,000 was up for grabs.

The prize money is now much more than this as the interest on £10,000 is also payable as prize money plus an extra £1 for every copy of Krakit sold.

The idea of the game is to discover the bank and the city where the money is being held. If you do this Artic will fly you to the correct city to collect your prize money.

A spokesman at Artic said that nobody had come close to getting the right city yet — though the game was still selling he could not tell us how many £1s had been added to the prize money.

New games in the pipeline from Artic include a line drawn 3D shoot 'em up for the Spectrum and Snooker.

DON'T SHOOT THE WHALE — OR ELSE!

MOBY DICK

Save the Whale activists will love Moby Dick! If you depth-charge the famous big White whale by mistake in the heat of a raging sea battle the Greenpeace ship comes after you.

The idea of the game is to down the helicopters that are bombarding your destroyer, and depth charge the subs that lurk in the deep — but watch out for that whale!

When you shoot down a helicopter be sure to catch the pilot who parachutes to safety.

Moby Dick runs on the Commodore 64 and is the latest addition to the PSS range.

Also new from the Coventry-based firm is a seven level Scramble-type game with a nuclear reactor waiting to be destroyed at the end of the winding tunnels.

Spectrum owners are also included in this new package with a game called Guardian which casts you as a space age prison warder. The worst criminals are housed in a laser grid in deepest space. It is your job to stop them escaping.

Armed with a powerful laser gun you must fly your craft with great precision around the perimeter of the prison forcing them back within its electronic walls.

The games are available now at £7.95 for the 64 titles, and £5.95 for the Guardian.



TRY PLAYING YOUR FACE YOUR WITH SPECTRUM!

A whole new world of games is opening up for Spectrum gamesters following the recent introduction of the long-awaited Microdrives, Sinclair has just launched the Spectrum Interface 2.

This device, which was previewed at the PCW show this Summer, is now generally available by mail order with none of the delays associated with the Microdrive and its Interface 1.

Interface 2 connects to the user port at the back of the Spectrum and will work on either a 16k or 48k machine, and with or without an Interface 1.

It enables the Spectrum to accept software on ROM cartridge as well as cassette, and also contains 2 joystick ports.

The main feature of the cartridge facility is that the software will be built into a chip and therefore takes no RAM. This means that a program which normally runs only in 48k will now run in cartridge form on a 16k machine.

The joystick scores over its rival, the Kempston interface, as there is provision for 2 controllers while Kempston has just one.

The new Sinclair software will be available to work with joysticks, and the manual also tells you how to adapt your own programs as well.

There are ten programs available on ROM initially, six from Sinclair's own range and also four Ultimate games, including Jet Pac.

To load a program from cartridge couldn't be easier. It's a lot faster than either cassette or Microdrive but, of course, you can't store your own programs on cartridge.

You simply plug the Interface 2 into the back of the Spectrum and plug the cartridge you wish to use into the slot on the interface.

As soon as you turn on the computer, the program is loaded and ready to play. It's as easy as that!

The introduction of joysticks may turn some of the software houses away from making programs compatible with other makes of joystick. It is likely that the Sinclair official interface will become the standard.

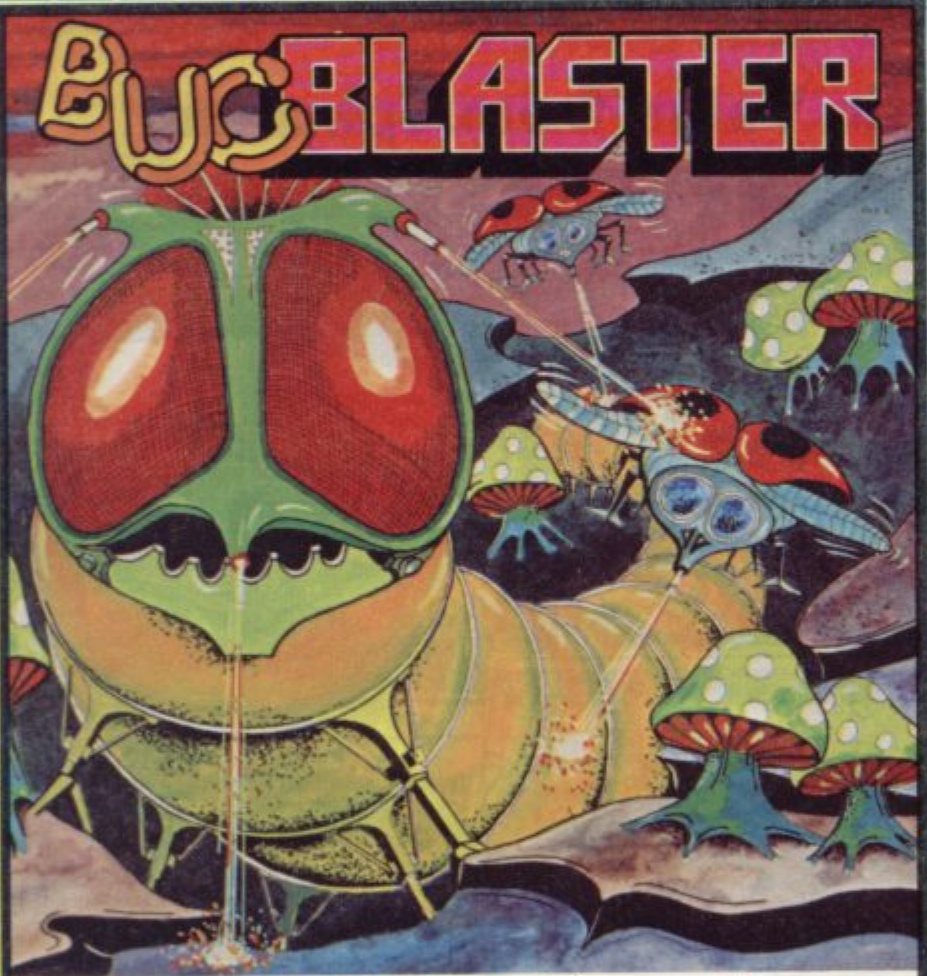
A ZX Interface 2 will cost you £19.95, while each ROM cart will retail at £14.95. Any standard Atari type joystick will work, and you'll have to buy these separately.



The REAL Challenge!
For your ORIC or SPECTRUM
Jogger Guide your joggers across a 4-lane motorway and crocodile infested river to reach their safe haven through the gap in the fence. Each time a jogger is safely home the next one will have to encounter more lorries and cars on the motorway but fewer crocodiles and logs in the river. Full on-screen instructions. M/code, sound effects and full action colour graphics.
Oric Author – Adrian Sheppard.
Spectrum Author – Mike Howard.
Oric 48K – £6·95 Spectrum 16/48K – £4.95.
ARCADE ACTION
JOGGER
FOR ORIC AND SPECTRUM
ARCADE ACTION
DINKY KONG
FOR ORIC 48K
SEVERN SOFTWARE
Quincy A superb dice game for 2 to 6 players. 3 throws per go to try and score points by obtaining certain combinations, i.e. 3 of a kind, a run, pairs etc. 13 go's to complete a game. The highest score is the winner! It's a game that is easy to learn but can be won by skilful and thoughtful play. Full colour graphics, on-screen instructions, bonus scores, etc.
Author – Tony Churcher.
Spectrum 48K – £4.95.
SEVERN SOFTWARE
QUINCY
FOR 48K SPECTRUM
Dinky Kong Attempt to rescue your lovely girlfriend who is held captive by the angry gorilla. As you climb the connecting ladders and move along the gangways, the gorilla will be throwing barrels and fireballs at you! The only way to reach her is to leap over these obstacles and progress to the top. M/code action with sound effects, full colour action graphics, skill levels etc.
Author – Adrian Sheppard.
Oric 48K – £6.95
Oricade A combined assembler Disassembler and editor for the Oric. ★Handles full 6502 Mnemonics. ★Features Save and Reload M/C. ★Assembles and disassembles at any address. ★An essential tool for any serious programmer.
Author – Adrian Sheppard.
Oric 48K – £8.50.
Oric titles recommended by ORIC PRODUCTS INT. LTD.
All Spectrum Software is available on Micronet 800.
TRADE ENQUIRIES WELCOME.
SEVERN SOFTWARE
SEVERN SOFTWARE
5 SCHOOL CRESCENT
LYDNEY
GLOUCESTER GL15 5TA
Grail You have been chosen to seek and recover the Holy Grail from the Castle Perilous. Throughout the course of your task you will have to use your skill, intelligence and logic (along with a little luck) as you encounter many foes. You will have the opportunity to gather weapons and armour to fight with, but if you are wounded your strength will drain away – many other features such as warp, jewels etc.
Author – Adrian Sheppard.
Oric 48K – £6.95.
ORICADE
ORIC 48K
Assembler Disassembler Editor
SEVERN SOFTWARE
MORIA
FOR ORIC AND SPECTRUM
SEVERN SOFTWARE
GRAIL
FOR ORIC 48K
All Oric titles available from Laskys.
Dinky Kong for Oric also available from WH Smith.
Moria A challenging adventure game set in the mines of Moria. You'll have to try and survive encounters with the monsters of middle-earth while trying to locate Durins Ring. The Wizard and the Trader may help or hinder you on your journey to find and open the hidden doors to freedom – a game that will really test your character and staying power.
Oric Author – Adrian Sheppard.
Spectrum Author – Mike Howard.
Oric 48K – £6·95 Spectrum 16/48K – £4.95.
Please send me (Tick box)
SPECTRUM 16/48K
Jogger @ £4.95
Quincy @ £4.95
Moria @ £4.95
ORIC 48K
Jogger @ £6.95
Dinky Kong @ £6.95
Moria @ £6.95
Oricade @ £8.50
Grail @ £6.95
I enclose Cheque/P.O. for £ made payable to Severn Software
Name
Address
CVG12
Severn Software, 5 School Crescent, Lydney, Gloucester GL15 5TA
All prices include VAT and P&P
Overseas P&P add 50p.

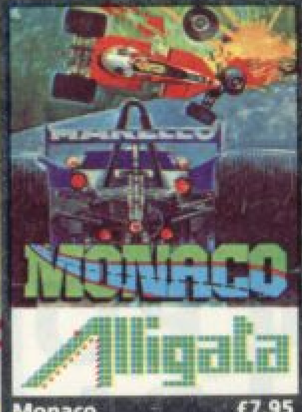
EXPLORE THE CRAZY WORLD OF BUGBLASTING but watch out for Brian





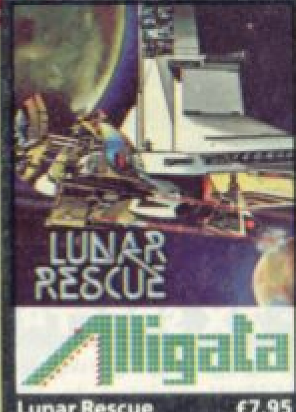
Bugblaster £7.95

A superb action packed arcade special. A really fast implementation of the splendid 'centipede.' Features include spiders, mushrooms, centipedes and the mushroom poisoning scorpion affectionately known as 'Brian.' The better you get the faster the action. Nerve tingling excitement should keep you up all night!



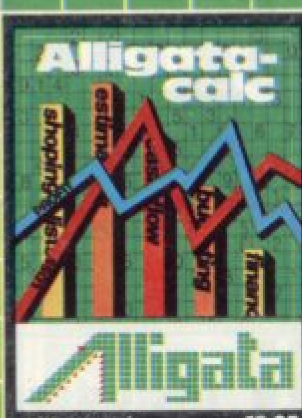
Monaco £7.95

Qualify in under 60 seconds for the race of a lifetime – fantastic speeds, death-defying manoeuvres and a narrowing circuit – an exacting challenge for a future world champion.



Lunar Rescue £7.95

Land your moon buggy and rescue a precious cargo, destroying all opposition on the way; finding your way back to the mother ship start again against greater odds.



Alligatacalc £9.95

The master spreadsheet – business or home – accounts, costings, profit and loss – solve any financial or numeric problems with automatic formulae calculation.



Fruit Machine £5.95

Keeping your money in your pocket enjoy the excitement of beating the one arm bandit.

Order today by post or telephone!

Superior Systems Ltd., 178 West Street, Sheffield S1 4ET. Tel: (0742) 755005

☐ Bugblaster ☐ Monaco ☐ Lunar Rescue ☐ Fruit Machine ☐ Alligatacalc

Please debit my Access/Barclaycard (delete as necessary) allow 75p P & P

Card No: ______ Signature: ______

for £ ______ I enclose cheque/PO for £ ______

Name ______

Address ______

Despatch is normally made on receipt of order and should reach you within 7 days.

Also available in this exciting range of games and utilities for the BBC Model B Micro:

Cosmic Asteroids	£5.95	DMON	£7.95 tape/£11.95 disk/ £19.95 ROM
Scribe II	£9.95		
Primary Art	£9.95	Flexibase	£9.95 tape/ £13.95 disk
ABM (Model A or B)	£5.95		

Alligata

SOFTWARE WITH BITE

spectrum

NEWS
from SPECTRUM

DISK DRIVE for ZX SPECTRUM

Now from SPECTRUM a Disk Drive for the ZX SPECTRUM exclusive to SPECTRUM stores see our ad for full details

Sensational COMMODORE OFFERS

see opposite

MEMOTECH MTX 500

A Super new computer now available from SPECTRUM see our ad for details - or call into your local SPECTRUM dealer NOW!

INDESCOMP ACCESSORIES for ZX SPECTRUM

A super new range of add-on's for your ZX SPECTRUM exclusive to SPECTRUM stores - see ad for full details

SPECTRUM BROADSHEET

Call into your local SPECTRUM dealer and pick up a copy of our latest Broadsheet listing an extensive range of additional equipment and a wide range of software.

NEW SPECTRUM MEMBERS

Check our address page! - there are many new SPECTRUM dealers throughout the UK so there's a good chance there'll be a SPECTRUM centre near you.

AFTER SALES CARE

SPECTRUM service centres will ensure that should your machine 'go down' we will get it running again as quickly as possible. We also offer extended warranties at reasonable prices too! - ask your SPECTRUM HOME COMPUTER CENTRE for full details

COMPUTER DEALERS

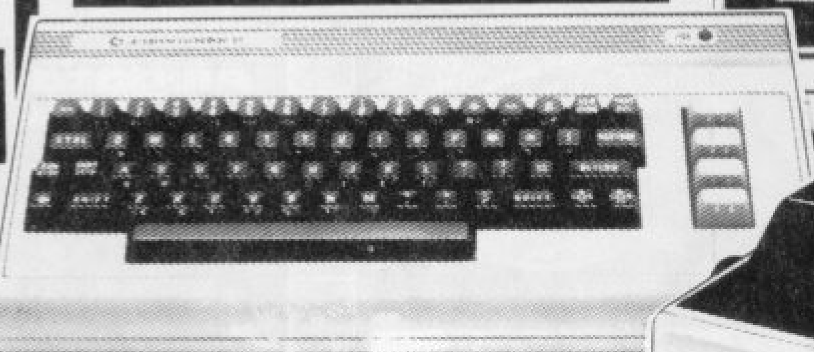
(or prospective Computer dealers!) If, you would like to know more about becoming a SPECTRUM APPOINTED DEALER on an exclusive area basis, please write to MIKE STERN, Spectrum (UK) Ltd., Burrowfield, Welwyn Garden City, Herts. or telephone (07073) 34761

Fantastic Value from Spectrum!

COMMODORE 64
BUSINESS PACKAGE

SAVE OVER £200







Includes:

- COMMODORE 64
- DISK DRIVE
- COLOUR MONITOR
- COMMODORE PRINTER
- FUTURE FINANCE PROGRAM

Plus!

- FREE! GAMES DISK WITH SIX GAMES

FOR THE SMALL BUSINESSMAN . . . this has to be the **business computer opportunity of a lifetime!** This superb, top-value package includes **everything** you need to set up your own powerful **small business/home Micro system.**

There's the high-power **Commodore 64** computer with its **huge 64K RAM memory** built-in and brilliant **graphics capability** with **full colour.**

The system's completed with a Commodore **Disk Drive** - store your entire filing system, accounts, sales records, etc. - plus VIC-1526 **tractor-feed Graphics Printer,** and a 1701 **colour monitor.**

It really is a tremendous package - at SPECTRUM'S incredible low price, **it's unbeatable!**

ALL THIS FOR ONLY

£899.99

Normal Retail Price £1107

All items can be purchased seperately - ask your local SPECTRUM dealer for price.

COM-64 Home Entertainment Package

ONLY

£239.99

(Normal retail price £282.85)

SAVE OVER £40

Includes: ■ COMMODORE 64 ■ CASSETTE INTERFACE ■ CASSETTE RECORDER ■ QUICK-SHOT JOYSTICKS ■ CASSETTE WITH 4 GAMES

Not all stores carry every advertised item, please phone before making a journey - prices correct at time of going to press E&OE

Turn the page for more super offers from Spectrum . . .

spectrum

SOFTWARE

The Top sellers from leading British Software houses.

Micro Dealer UK

ZX SPECTRUM

Legend "Valhalla"	£14.95
Ultimate "Lunar Jet Man"	£5.50
Ultimate "Atic Atac"	£5.50
Bug-byte "Manic Miner"	£5.95
Quicksilva "3-D Ant Attack"	£6.95
A & F "Chuckie Egg"	£6.90
CDS "Pool"	£5.95
Crystal "Halls of the Things"	£7.50
Ocean "Kong"	£5.90
Quicksilva "Games Designer"	£14.95
Imagine "Zzoom"	£5.50
Incentive "Splatt"	£5.50
New Generation "Corridors of Genon"	£5.95
Quicksilva "Bugaboo"	£6.95
Ultimate "Jet Pac"	£5.50
Artic "Dimension Destructors"	£5.95
Protek "Hunter Killer"	£7.95
Red Shift "Apocalypse"	£9.95
Ocean "Transversion"	£5.50
Ultimate "Tranz Am"	£5.50
Addictive Games "Football Manager"	£6.95
Quicksilva "Aquaplane"	£6.95
Doric "Oracles Cave"	£7.95
Artic "3-D Combat Zone"	£5.95
Hewson "3-D Space Wars"	£5.95

Commodore 64

Llamasoft "Hovver Bovver"	£7.50
Llamasoft "Attack of the Mutant Camels"	£7.50
Melbourne House "Hungry Horace 64"	£5.95
Interceptor "Siren City"	£7.00
Games Machine "The fabulous Wanda and the secret of life, the universe and everything"	£7.95
Bubblebus "Exterminator"	£5.99
Quicksilva "Purple Turtles"	£7.95
Ocean "Armagadden 64"	£6.90
Melbourne House "The Hobbit 64"	£14.95
Interceptor "Vautex Raider"	£7.00
Llamasoft "Matrix 64"	£7.50
Anirog "H-expert"	£7.95
Quicksilva "Quintic Warrior"	£7.95

VIC-20

Ultimate "Jet Pac"	£5.50
Llamasoft "Meta Galactic Llamas battle at the edge of time"	£6.00
Imagine "Bewitched"	£5.50
Quicksilva "Skyhawk"	£7.95
Llamasoft "Matrix"	£6.00
Interceptor "Crazy Kong"	£6.00
Imagine "Arcadia"	£5.50

BBC

Software Invasion "Attack on Alpha Centauri"	£7.95
Psion "Saloon Sally"	£7.95
DoctorSoft "Flight Simulator"	£7.95
Amcom "Space Highway"	£7.95
Alligator "Bug Blaster"	£7.95

ORIC

Softek "Dracula's Revenge"	£6.95
UK Software "Zorgon's Revenge"	£8.50
Martech "Harrier Attack"	£6.95

DRAGON 32

Softek "Ugh!"	£8.95
J Maurice Micros "Maurice Minor"	£7.95

SUNSHINE

Cruising (Dragon 32)	£6.95
Cruising (ZX Spectrum)	£4.95
Blind Alley (ZX Spectrum)	£4.95
Androids (ZX Spectrum)	£5.95
Galaxy Attack (ZX Spectrum 48K)	£5.95
Sword Fight (ZX Spectrum)	£5.95

MICRODEAL

DRAGON

The King	£8.00
Space War	£8.00
Defence	£8.00
Alcatraz	£8.00
Katerpillar Attack	£8.00
Space Monopoly	£8.00
Mansion Adventure	£8.00

RABBIT

Three super new releases from RABBIT SOFTWARE

Paratroopers	£5.99
Lancer Lords	£5.99
Potty Painter	£5.99

Available for COMMODORE VIC-20 & CBM-64 and ZX SPECTRUM. Plus other top selling RABBIT SOFTWARE titles

LEDA COMPUTER CARE KITS



For Cassette **£9.95**



For Disk **£12.95**

BOOKS

GRANADA PERSONAL COMPUTING TITLES

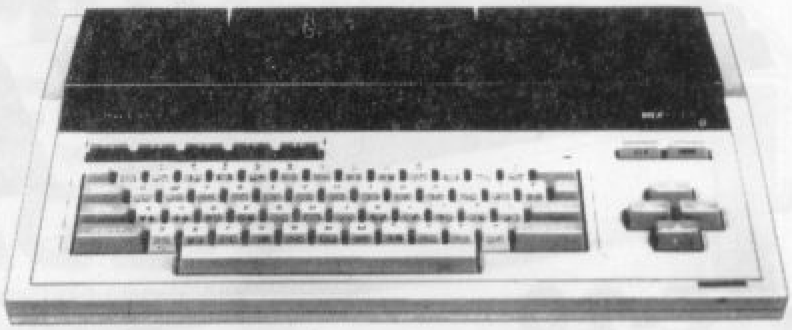
The ZX Spectrum and how to get the most from it	£5.95
The Spectrum Programmer	£5.95
The Spectrum Book of Games	£5.95
Introducing Spectrum Machine Code	£7.95
The Apple II Programmer's Handbook	£10.95
Programming with Graphics	£5.95
The Dragon & how to make the most of it	£5.95
Computing for the Hobbyist & small Business	£6.95
Simple Interfacing Projects	£6.95
The BBC Micro An expert guide	£6.95
Commodore 64 Computing	£5.95
The Oric-1 and how to get the most from it	£5.95
The Dragon 32 book of games	£5.95
Computer Languages and their uses	£5.95
Lynx Computing	£6.95
21 Games for the BBC Micro	£5.95
Choosing a Microcomputer	£4.95
Databases for fun & profit	£5.95
Introducing the BBC Micro	£5.95

SUNSHINE

The Working Spectrum	£5.95
Functional Forth for the BBC	£5.95
The Working Dragon 32	£5.95
Dragon 32 Games Master	£5.95
The Working Commodore 64	£5.95
Commodore 64 Machine Code Master	£6.95
The Working Dragon	£5.95
The Working Spectrum	£5.95
The Working CBM 64	£5.95
Dragon 32 Games Master	£5.95
Functional Forth for the B.B.C	£5.95
Androids for the 16K Spectrum	£5.95
Sword Fight for 16K Spectrum	£5.95
Galaxy Attack for 48K Spectrum	£5.95
Blind Alley for 16K Spectrum	£5.95
Cruising for 16K Spectrum	£5.95

SHARP MZ 711

(MZ-700 Series Computer)



FREE! 10 CASSETTE BASED GAMES

The super new colour computer from SHARP. Now available in limited quantities - including 10 FREE CASSETTE BASED GAMES from SPECTRUM

SPECTRUM PRICE

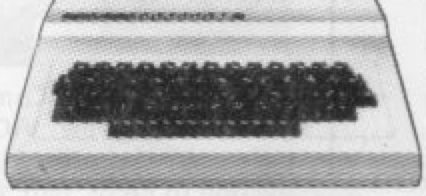
£249.95

SHARP PRINTER £129.95

CASSETTE RECORDER £39.95

SHARP MZ80A £399

DRAGON



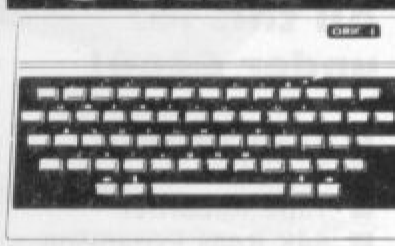
Extensive facilities include highly advanced colour graphics. Powerful standard 32K RAM (expandable to 64K Bytes) • 9 Colour 5 resolution Display • Extended Microsoft colour BASIC (as standard) • Advanced sound with octaves -255 tones

CHECK WITH YOUR LOCAL SPECTRUM DEALER NOW FOR OUR SUPER LOW PRICE

DRAGON Single DISC DRIVE Now available **£275.00**

JOYSTICK INTERFACE allows connection of ATARI type Joysticks **£14.95**

ORIC-I



SPECTRUM PRICE

£139.95

HALF PRICE OFFER!

Bring a copy of this ad to your local SPECTRUM dealer when you purchase an ORIC-4 48K and it will entitle you to purchase the following 4 titles of Software at HALF-PRICE! ■ MULTIGAMES ■ ORICFLIGHT ■ CHESS ■ ZODIAC

LYNX 96K



Now from SPECTRUM - the new LYNX 96K offering more workspace for ambitious programs. The most important feature of the 96K machine is its additional memory. In full high resolution colour, it provides 37.5K of RAM directly accessible in Basic - with up to 24K more available to programs using machine code. Ask to see the super new LYNX 96K at SPECTRUM -NOW!

For the Lynx owners who're ready to take the next step, the 48K machine can be upgraded to full 96K specification for just **£89.95**

LYNX 48K Model - SPECTRUM PRICE **£199**

SPECTRUM PRICE

£299

Not all stores carry every advertised item, please phone before making a journey -prices correct at tme of going to press E&OE.

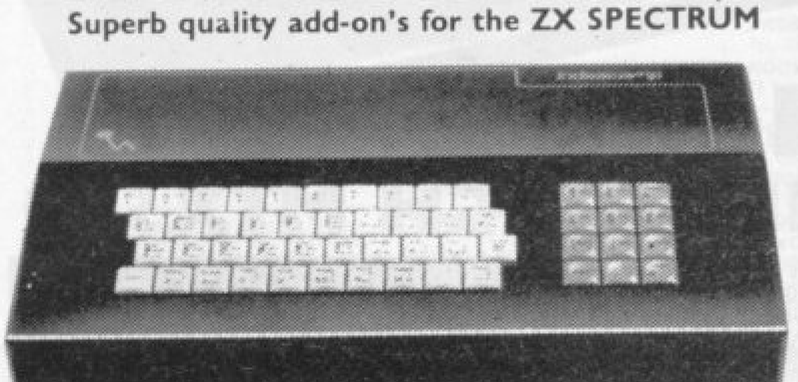
Everything you've ever wanted for your ZX SPECTRUM

Superb ZX add-on's from your local Spectrum dealer

New & exclusive to Spectrum!

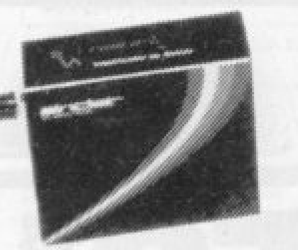
INDESCOMP

Superb quality add-on's for the ZX SPECTRUM



INDESCOMP **KEYBOARD** WITH FULLY ADJUSTABLE SOUND **£59.95**

INDESCOMP SOUND AMPLIFIER



ONLY £10.95

INDESCOMP JOY STICK INTER-FACE



£14.95

INDESCOMP 32K RAM PACK



£39.95

INDESCOMP DOMESTIC CONTROLLER



£49.95

INDESCOMP RS232 & CENTRONICS PRINTER INTERFACE **£49.95**

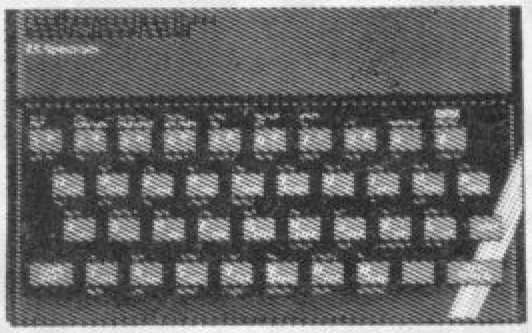
ALPHACOM Thermal Printer for ZX SPECTRUM - NOW DOWN TO **£59.95**

DIGITAL TRACER



From RD Labs for the ZX Spectrum

£55.50



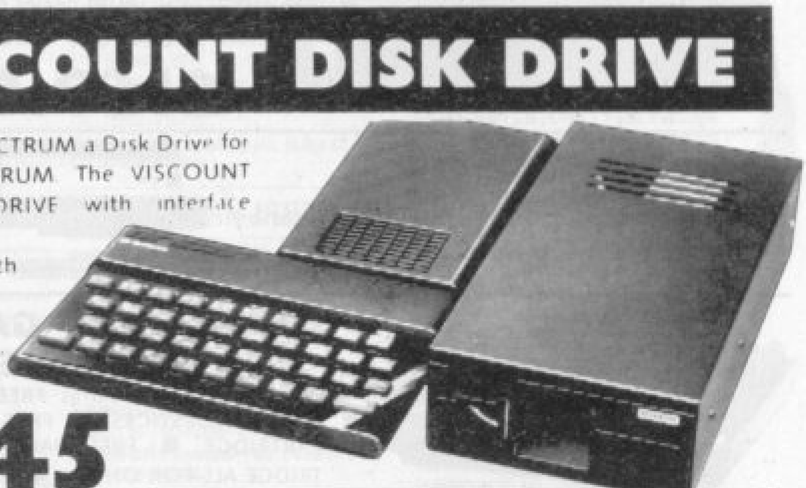
ZX SPECTRUM 16K £99.95

ZX SPECTRUM 48K £129.95

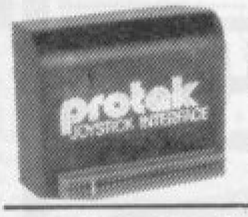
Spectrum Computer Centres have no connection whatsoever with the ZX-Spectrum Computer manufactured by Sinclair Research Ltd.

VISCOUNT DISK DRIVE

Now from SPECTRUM a Disk Drive for the ZX SPECTRUM. The VISCOUNT 5¼" DISK DRIVE with interface system and complete with all leads



ONLY **£245**



PROTEC Joystick Interface **£14.95**

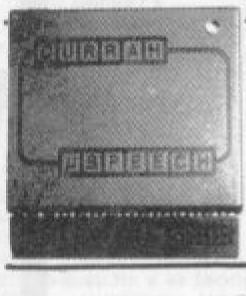
KEMPSTON Joystick Interface (Joysticks opt. extra)



£15

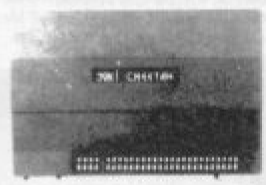
Joysticks with interface £24.95

Centronics Interface £45.00



CURRAH Speech Synthesiser **£29.95**

CHEETAH 32K RAM Pack **£39,95**



DK'TRONICS Keyboard £45.00

DK'TRONICS Lightpen £19.95

STACKLIGHT Rifle with 3 FREE GAMES £29.95

PRISM VTX 5000 MODEM



Now, your ZX SPECTRUM is your key to the world with the incredible PRISM VTX 5000 MODEM

■ Versatile modem for ZX Spectrum (16K or 48K) versions ■ Slim design fits easily, matches your micro ■ Instant access to Prestel™ & Micronet 800 information services ■ Instant communication with other ZX Spectrum users ■ Use the Prism VTX 5000 with a Sinclair printer - and print Prestel frames. Ask your local SPECTRUM dealer for further details - NOW!

SPECTRUM PRICE **£99.95**

SINCLAIR ZX-81

with 16K RAM pack & One piece of Software ALL FOR ONLY **£45**

ZX-81 ACCESSORIES

64K RAM PACK £54.95

16K RAM Pack £24.95

ZX Printer £39.95

Turn the page for more super offers from Spectrum . . .

Spectrum Computer Centres have no connection whatsoever with the ZX-Spectrum Computer manufactured by Sinclair Research Ltd.

There's a Spectrum Centre near you . .

AVON

BATH Software Plus, 12 York St. TEL: (0225) 61676
BRISTOL Brensal Computers Ltd., 24 Park Row. TEL: (0272) 294188
WESTON-SUPER-MARE K. & K. Computers, 32 Alfred St. TEL: (0934) 419324

BEDFORDSHIRE

BEDFORD Stanad Ltd., 115 Midland Rd. TEL: (0234) 49341
DUNSTABLE Dormans, 7-11 Broad Walk. TEL: (0582) 65515
LEIGHTON BUZZARD The Computer Centre at Milton Keynes Music, 17 Bridge St. TEL: (0525) 376622
LUTON Terry-More, 49 George St. TEL: (0582) 23391/2

BERKSHIRE

READING David Saunders, 8 Yield Hall Place. TEL: (0734) 580719
WINDSOR Wycombe Video, 44 King Edward Court. TEL: (07535) 67441

BUCKINGHAMSHIRE

BLETCHLEY Rams Computer Centre, 117 Queensway. TEL: (0908) 647744
CHESHAM Reed Photography & Computers, 113 High St. TEL: (0494) 783373

CAMBRIDGESHIRE

CAMBRIDGE K. P. Ltd., 12a Kings Parade. TEL: (0223) 68087
PETERBOROUGH Peterborough Communications, 91 Midland Rd. TEL: (0733) 41007

CHANNEL ISLANDS

GUERNSEY Grut's, 3-5 The Pollet, St. Peter Port. TEL: (0481) 24682
JERSEY Audio & Computer Centre, 7 Peter St. St. Helier. TEL: (0534) 74000

CHESHIRE

ALTRINCHAM Mr. Micro, 28 High St. TEL: (061) 941 6213
CREWE Microman, Unit 2, 128 Nantwich Rd. TEL: (0270) 216014
CHESTER Oakleaf Computers Ltd., 100 Boughton. TEL: (0244) 310099
MACCLESFIELD Camera & Computer Centre, 118 Mill St. TEL: (0625) 27468
NORTHWICH Camera & Computer Centre, 3 Town Sq. TEL: (0606) 45629
STOCKPORT Wilding Ltd., 1 Little Underbank. TEL: (061) 480 3435
WARRINGTON Wildings, 111 Bridge St. TEL: (0925) 38290
WIDNES Computer City, 78 Victoria Rd. TEL: (051) 420 3333
WILMSLOW Swift of Wilmslow, 4-6 St. Annes Parade. TEL: (0625) 526213

CLEVELAND

MIDDLESBROUGH McKenna & Brown, 205 Linthorpe Rd. TEL: (0642) 222368

CORNWALL

ST. AUSTELL A B & C Computers, Duchy House, 6 Lower Aylmer Sq. TEL: (0726) 67337

CUMBRIA

BARROW-IN-FURNESS Barrow Computer Centre, 96 Church St. TEL: (0229) 38353
CARLISLE The Computer Shop, 56-58 Lowther St. TEL: (0228) 27710
PENRITH Penrith Communications, 14 Castlegate. TEL: (0768) 67146. Open Mon – Fri till 8 p.m.
WHITEHAVEN P. D. Hendren, 15 King St. TEL: (0946) 2063

DERBYSHIRE

ALFRETON Gordon Harwood, 69/71 High St. TEL: (0773) 832078
CHESTERFIELD The Computer Centre, 14 Stephenson Place. TEL: (0246) 208802
DERBY C T Electronics, at Camera Thorpe, The Spot. TEL: (0332) 360456

DEVON

EXMOUTH Open Channel, 30 The Strand. TEL: (03952) 4408
PLYMOUTH Syntax Ltd., 76 Cornwall St. TEL: (0752) 28705
TIVERTON Actron Micro Computers, 37 Bampton St. TEL: 0884 252854
TORQUAY Devon Computers, 8 Torhill Rd., Castle Circus. TEL: (0803) 526303

DORSET

BOURNEMOUTH Lansdowne Computer Centre, 5 Holdenhurst Rd. TEL: (0202) 20165

DURHAM

DARLINGTON McKenna & Brown, 102 Bondgate. TEL: (0325) 459744

ESSEX

BASILDON Godfrey's 28-32 East Walk, Town Centre. TEL: (0268) 289379
CHELMSFORD Maxton Hayman Ltd., 5 Broomfield Rd. TEL: (0245) 354595
COLCHESTER Colchester Computer Centre, 16 St. Botolphs St. TEL: (0206) 47242
GRAYS H. Reynolds, 79 Orsett Rd. TEL: (0375) 5948
ILFORD Woolfmans, 76 Ilford Lane. TEL: (01) 478 1307
LOUGHTON Micro & Movie Channel, 309 High Rd. TEL: (01) 508 1216

GLOUCESTERSHIRE

GLOUCESTER The Model Shop, 79-81 Northgate St. TEL: (0452) 410693

HAMPSHIRE

ALDERSHOT David Saunders, 51 Station Rd. TEL: (0252) 20130
ANDOVER Andover Audio, 105 High St. TEL: (0264) 58251
BASINGSTOKE Fisher's, 2-3 Market Place. TEL: (0256) 22079
PORTSMOUTH Cygnus Computers Ltd., 261 Commercial Rd. TEL: (0705) 833938
PORTSMOUTH Waterlooville G B Microland, 7 Queens Prde. TEL: (07014) 59911
SOUTHAMPTON R. J. Parker & Son Ltd., 11 West End Rd., Bitterne. TEL: (0703) 445926
WINCHESTER Winchester Camera & Computer Centre, 75 Parchment St. TEL: (0962) 53982 (Just Opening)

HEREFORD

HEREFORD Melgray Hi-Tech Ltd., 49 Broad St. TEL: (0432) 275737

HERTFORDSHIRE

BOREHAM WOOD Master Micro, 36 Shenley Rd. TEL: (01) 953 6368
HITCHIN Camera Arts (Micro Computer Division), 68a Hermitage Rd. TEL: (0462) 59285
POTTERS BAR The Computer Shop, 197 High St. TEL: (0707) 44417
ST. ALBANS (Herts) Clarks Computer Centre, 14/16 Holywell Hill. TEL: (0727) 52991
STEVENAGE D. J. Computers, 11 Town Sq. TEL: (0438) 65501
WATFORD SRS Microsystems Ltd., 94 The Parade, High St. TEL: (0923) 26602

HUMBERSIDE

GRIMSBY R. C. Johnson Ltd., 22 Friargate, Riverhead Centre. TEL: (0472) 42031

ISLE OF MAN

DOUGLAS T. H. Colebourn Ltd., 57-61 Victoria St. TEL: (0624) 3482 (Just Opening)

KENT

CANTERBURY Kent Micro Systems, Conquest House, 17 Palace St. TEL: (0227) 50200
DOVER Kent Photos & Computers, 4 King St. TEL: (0304) 202020
ORPINGTON Ellis Marketing Ltd., 25 Station Sq., Petts Wood. TEL: (0689) 39476
RAINHAM Microway Computers Ltd., 39 High St., Medway Towns. TEL: (0634) 376702
SEVENOAKS Ernest Fielder Computers, Dorset St. TEL: (0732) 456800
SITTINGBOURNE Computers Plus, 65 High St. TEL: (0795) 25677
TUNBRIDGE WELLS Modata Computers Ltd., 28-30 St. Johns Rd. TEL: (0892) 41555

LANCASHIRE

ACCRINGTON PV Computers, 38A Water St. TEL: (0254) 36521/32611
BLACKBURN Tempo Computers, 9 Railway Rd. TEL: (0254) 691333
BURNLEY IMO Computer Centre, 39-43 Standish St., BB11 1AP. TEL: (0282) 54299
BURY (Lancs.) Micro-North, 7 Broad St. TEL: (061) 797 5764
OLDHAM Home & Business Computers Ltd., 54 Yorkshire St. TEL: (061) 633 1608
PRESTON Wilding's 49 Fishergate. TEL: (0772) 556250
ROCHDALE Home & Business Computers, 75 Yorkshire St. TEL: (0706) 344654

LEICESTERSHIRE

LEICESTER Youngs, 40/42 Belvoir St. TEL: (0533) 544774
MARKET HARBOROUGH Harborough Home Computers, 7 Church St. TEL: (0858) 63056

LINCOLNSHIRE

GRANTHAM Oakleaf Computers Ltd., 121 Dudley Rd. TEL: (0476) 76994/70281
LINCOLN MKD Computers, 24 Newlands. TEL: (0522) 25907

LONDON

E6 Percivals, 85 High St. North, East Ham. TEL: (01) 472 8941
E8 McGowans, 244 Graham Rd., Hackney. TEL: (01) 533 0935
EC1 Sidney Levy, 17-19 Leather Lane. TEL: (01) 242 3456
EC2 Devron Computer Centre, 155 Moorgate. TEL: (01) 638 3339/1830
N14 Logic Sales, 19 The Broadway, The Bourne, Southgate. TEL: (01) 882 4942
N20 Castlehurst Ltd., 1291 High Rd. TEL: (01) 446 2280
NW4 DA Vinci Computer Store, 112 Brent St., Hendon. TEL: (01) 202 2272/3/4
SE1 Vic Odden's, 6 London Bdg Walk. TEL: (01) 403 1988
SE9 Square-Deal, 375 Footscray Rd., New Eltham. TEL: (01) 859 1516
SE11 Gatwick Computers, 328 Kennington Pk. Rd. TEL: (01) 587 0336 Adjacent to Oval Tube
SE15 Castlehurst Ltd., 152 Rye Lane, Peckham. TEL: (01) 639 2205
SE25 Ellis Marketing, 79 High St., South Norwood. TEL: (01) 653 4224
SW6 Chelsea Micros Ltd., 14 Jerdan Place. Next to Fulham B/way. TEL: (01) 385 8494
W1 Devron 4 Edgware Rd. TEL: (01) 724 2373
W1 Computers of Wigmore Street, 87 Wigmore St. TEL: (01) 486 0373
W1 Sonic Foto & Micro Center, 256 Tottenham Court Rd. TEL: (01) 580 5826

MANCHESTER GREATER

MANCHESTER Lomax Ltd., 8 Exchange St., St. Ann's Sq. TEL: (061) 832 6167
SWINTON Mr. Micro Ltd., 69 Partington Lane. TEL: (061) 7282282 'Late Night Friday'
HYDE Pase, 213-215 Market St. TEL: (061) 366 5935
BOLTON Wilding Ltd., 23 Deansgate. TEL: (0204) 33512
WIGAN Wilding Ltd., 11 Mesnes St. TEL: (0942) 44382

MERSEYSIDE

BIRKENHEAD Fairs Cameras & Hi-Fi, Dacre Hill, Rock Ferry. TEL: (051) 645 5000
HESWALL Thornguard Computer Systems, 46 Pensby Rd. TEL: (051) 342 7516
LIVERPOOL Beaver Radio, 20-22 Whitechapel. TEL: (051) 709 9898
LIVERPOOL (Aintree) Hargreaves, 31/37 Warbreck Moor. TEL: (051) 525 1782
SOUTHPORT Central Computers, 575 Lord St. TEL: (0704) 31881

MIDDLESEX

EDGWARE Breaker 1-4, 130 High St. TEL: (01) 952 7488/8860
HARROW Camera Arts (Micro Computer Division, 24 St. Ann's Rd. TEL: (01) 427 5469
HAYES Chipstop, 1000 Uxbridge Rd. TEL: (01) 573 2511 (Just Opening)
TEDDINGTON Teddington Camera Centre, Broad St. TEL: (01) 977 4716
UXBRIDGE JKL Computers Ltd., 7 Windsor St. TEL: (0895) 51815

NORFOLK

NORWICH Sound Marketing, 52 St. Benedicts St. TEL: (0603) 667725
THETFORD Thetford C B & Micros, 21 Guildhall St. TEL: (0842) 61645

NORTHANTS

NORTHAMPTON Basic Computers & Systems Ltd., 72 Kingsthorpe Hollow. TEL: (0604) 710740

NOTTINGHAMSHIRE

NOTTINGHAM Cameo Computers, 8/9/10 Trinity Walk. TEL: (0602) 742912
NOTTINGHAM Basic, 39-41 Trent Boulevard, West Bridgeford. TEL: (0602) 819713
WORKSOP Computagrafix, Bridge St. TEL: (0909) 472248

NORTHERN IRELAND

BELFAST Arthur Hobson Ltd., 37 Gt. Victoria St. TEL: (0232) 246336
LONDONDERRY Foyle Computer Systems, 3 Bishop St. TEL: (0504) 268337

OXFORDSHIRE

ABINGDON Ivor Fields Computers, 21 Stert St. TEL: (0235) 21207
BANBURY Computer Plus, 2 Church Lane. TEL: (0295) 55890
HENLEY ON THAMES Family Computers Ltd., 40A Bell St. TEL: (0491) 575744
OXFORD Ivor Fields, 7 St. Ebbes St. TEL: (0235) 21207

SCOTLAND

ABERDEEN North East Computers, 1-3 Ellis St., Peterhead. TEL: (0779) 79900
AYR Vennals, 6a New Bridge St. TEL: (0292) 264124
DUMFRIES Vennals, 71 English St. TEL: (0387) 4547
EDINBURGH The Silicon Centre, 6-7 Antigua St. TEL: (031) 557 4546
GLASGOW Victor Morris Ltd., 340 Argyle St. TEL: (041) 221 8958
HAMILTON Tom Dickson Computers, 8-12 Cadzow St. TEL: (0698) 283193
KILMARNOCK Vennals, 49 Foregate. TEL: (0563) 32175
KIRKCALDY Kirkcaldy Photographic Services, 254E High St., Fife. TEL: (0592) 204734
STIRLING R. Kilpatrick, 58 Port St. TEL: (0786) 5532

SHROPSHIRE

SHREWSBURY Computerama, 13 Castlegate. TEL: TBA

SOMERSET

TAUNTON Grays, 1 St. James St. TEL: (0823) 72986

STAFFORDSHIRE

STAFFORD, Computerama, 59 Forgate St. TEL: (0785) 41899
STOKE-ON-TRENT Computerama, 11 Market Sq., Arcade, Hanley. TEL: (0782) 268620

SUFFOLK

BURY ST. EDMUNDS Bury Computer Centre, 11 Guildhall St. TEL: (0284) 705772
FELIXSTOWE K. M. Communications Ltd., 4 Manning Rd. TEL: (0394) 271113 or 273459
IPSWICH Brainwave, 24 Crown St. TEL: (0473) 50965
LOWESTOFT John Wells, 44 London Rd., North. TEL: (0502) 3742

SURREY

CAMBERLEY Camera Arts (Micro Computer Division), 36 High St. TEL: (0276) 65848
CHERTSEY Chertsey Computer Centre, 1 Windsor St. TEL: (09328) 64663
GUILDFORD The Model Shop, 23 Swan Lane. TEL: (00772) 0483 39115
HASLEMERE Haslemere Computers, 25 Junction Place, adj. Rex Cinema. TEL (0428) 54428
NEW MALDEN Surrey Micro Systems, 31 High St. TEL: (01) 942 0478
WALLINGTON Surrey Micro Systems Ltd., 53 Woodcote Rd. TEL: (01) 647 5636
WOKING Harpers, 71/73 Commercial Way. TEL: (04862) 25657

SUSSEX

BEXHILL-ON-SEA Computerware, 22 St Leonards Rd. TEL: (0424) 223340 (Opening Mid-October)
LITTLEHAMPTON Alan Chase Ltd., 39 High St. TEL: (09064) 5674/4545

TYNE & WEAR

NEWCASTLE-ON-TYNE Newcastle Camera & Computer Mart, 16 Northumberland Ct. TEL: (0632) 327461

WALES

ABERDARE Inkey Computer Services Ltd., 70 Mill St., The Square, Trecynon. TEL: (0685) 881828
ABERYSTWYTH AberData at Galloways, 23 Pier St. TEL: (0970) 615522
CARDIFF Randall Cox, 18/22 High St. Arcade. TEL: (0222) 31960
LLANDUDNO (Gwynedd) Computer Plus Discount, 15 Clonmel St. TEL: (0492) 79943
NEWPORT (Gwent) Randall Cox, 118 Commercial St. TEL: (0633) 67378
PEMBROKE Randall Cox, 19 Main St. TEL: (064) 668 2876
PORT TALBOT Micro Gen, 6 Royal Buildings, Talbot Rd. TEL: (0639) 887730
WREXHAM T E Roberts, 26 King St. TEL: (0978) 364404/364527

WARWICKSHIRE

LEAMINGTON SPA IC Computers, 43 Russell St. TEL: (0926) 36244
RUGBY The Rugby Micro Centre, 9-11 Regent St. TEL: (0788) 70522

WEST MIDLANDS

BIRMINGHAM Sherwoods, Gt. Western Arcade. TEL: (021) 236 7211
DUDLEY Central Computers (Dudley), 35 Churchill Precinct. TEL: (0384) 238169
ERDINGTON The Gamekeeper Grand Fare, High St. TEL: (021) 3846108
WEST BROMWICH Bell & Jones, 39 Queens Sq. TEL: (021) 553 0820

WILTSHIRE

SALISBURY Whymark Computer Centre, 20 Milford St. TEL: (0722) 26688

WORCESTER

WORCESTER David Waring Ltd., 1 Marmion House, High St. TEL: (0905) 27551

YORKSHIRE

BRADFORD Erricks Foto-Sonic House, Rawson Sq. TEL: (0274) 309266
HUDDERSFIELD Richards (formerly Lauries) 12 Queen St. TEL: (0484) 25334
HULL The Computer Centre (Humberside) Ltd., 26 Anlaby Rd. TEL: (0482) 26297
LEEDS Bass & Bligh, 4 Lower Briggate. TEL: (0532) 454451
SHEFFIELD Superior Systems Ltd., 178 West St. TEL: (0742) 755005
SKIPTON Look & See, 45 Belmont Bridge. TEL: (0756) 60078
YORK York Computer Centre, 7 Stonegate Arcade. TEL: (0904) 641862

Not all stores carry every advertised item, please phone before making a journey - prices correct at time of going to press E&OE



BOOST the sound of your SPECTRUM computer

SOUND AMPLIFIER. Enhance the quality of your Spectrum programmes and games with the Pinnacle Sound Amplifier. This battery powered amplifier/speaker simply connects to your micro, producing good quality sound necessary for the full enjoyment of music programmes and games with sound effects.

FEATURES:

- Simple to connect – no internal connections
- Self powered by standard batteries – eliminates additional cables
- LED Indicator
- Two output levels
- Provides audible response when inputting from keyboard
- Independent from video signal – does not affect receiver tuning

AROUND £7.99

PINNACLE

PINNACLE ELECTRONICS LIMITED Pinnacle House, Oasthouse Way, Orpington, Kent BR5 3QJ. Telephone (0689) 27000

AVAILABLE FROM

AVON
Weston-Super-Mare — Peter Castell

BEDS
Bedford — Software Centre; Carlo Radio
Luton — Hobbs Components

BERKS
Windsor — Castle Computers

CAMBS
Kimbolton — W. J. Watson
Oundle — Oundle Sound Suite
Peterborough — Robertsons
Sawston — Vindis & Son
Wisbech — Bardells

CHESHIRE
Chester — Computer Link
Ellesmere Port — Offley Bros.
Latchford — Micro Electronics
Warrington — The Box Office; Micro Electronics

CLEVELAND
Middlesbrough — RSC; Ben Williams
Stockton-on-Tees — Bond & Mason

CUMBRIA
Barrow in Furness — Video Shop

DERBYSHIRE
Belper — S. H. TV
Bolsover — S. L. Smith
Derby — R. F. Potts
Ilkeston — K. Freer

DEVON
Tiverton — Roy Hart

ESSEX
Basildon — Rival Records
Clacton-on-Sea — W. A. Baker
Colchester — Mr. Said
Southend — Golden Disc

GT. MANCHESTER
Bury — K. S. Electronics
Eccles — Play Inn
Manchester — Shude Hill Supplies

HANTS
Basingstoke — Thirwell & Allen
Fareham — Direct Audio Systems
Gosport — Electrotrade
Havant — Electrotrade
Portsmouth — R. D. S. Computer Services; R. A. Fraser (Drayton)
Southampton — Squibb Electronics; Affecks

HERTS
Bishops Stortford — Leapfrog Records
Boreham Wood — Field Electrics
Royston — Monty Radio
Watford — Component Centre

HUMBERSIDE
Hull — Tomorrow's World
Scunthorpe — Johns Music

KENT
Herne Bay — H. T. V. Services
Maidstone — Baldocks; Scan Electronics (Kingswood)

LANCS
Accrington — P. V. Tubes
Blackpool — Melody House
Cleveleys — Electronic Services
Fleetwood — Microchip Shop
Lytham St. Annes — R. Seedle Ltd.

LEICESTERSHIRE
Leicester — Mays; R.S.C.
Loughborough — Murcotts
Market Harborough — Market Harborough Computer Centre

LINCS
Boston — Mellors; Yates & Greenhoff
Bourne — J. H. Wand
Holbeach — Holbeach Music
Horncastle — Yates & Greenhoff
Skegness — Yates & Greenhoff
Spilsby — Yates & Greenhoff

LONDON
S.E.8 Deptford — Garland Bros.
Harrow — Odeon Radio
E.C.4 — Sternway Electronics
N.W.1 — Station Radio Electrics
N.10 Muswell Hill — Andys Electronics
S.W.16 Streatham — Francis Typewriters
Stanmore — A. H. Radio
W.2 Edgware Road — R.S.C.

MERSEYSIDE
Heswall (Wirral) — Thornguard Ltd.

NORFOLK
Gt. Yarmouth (Gorleston) — Norfolk Video
Harleston — Sight & Sound

NORTHANTS
Northampton — H. G. Radkin; South East Midlands Co-op; Richard Reeves
Raunds — Alpha Nu
Weston Favell — Leisuretime

NORTHUMBERLAND
Blyth — A. Bell

NOTTS
Binham — L. R. Mees
Eastwood — Richard Rhodes
Hucknall — S. P. Electronics
Longeaton — Gilberts
Nottingham (Arnold) — R. Hellebart & Son
Nottingham — R.S.C.

OXON
Henley — Family Computers
Oxford — P. H. Electronics
Witney — Witney Audio Centre

SALOP
Shrewsbury — Mitchells

STAFFS
Tamworth — Microtronics
Tamworth (Fazeley) — Filmville Ltd.

SURREY
Cobham — Cobham Radio
Guildford — Guildford Computer Centre

SUSSEX
Brighton — Gammer
Crawley — Kirkmans
Lewes — Record Bar

TYNE & WEAR
Newcastle — J. Sykes

WEST MIDLANDS
Birmingham — R.S.C.
Coventry — R.S.C.

WILTS.
Andover — Peter Parks Andover Radio

N. YORKS
Bridlington — Dixons
Driffield — Dixons
Scarborough — Dixons
Selby — Studio Two
Wetherby — Horton and Hollender

S. YORKS
Barnsley — Greens Telecom
Sheffield — Just Micro; Cork & Green

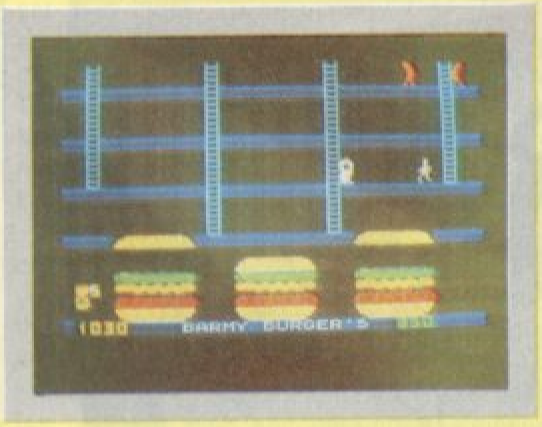
W. YORKS
Bradford — Empire Electro Centres
Halifax — Woods
Huddersfield — Townsend Computers
Leeds — Micro-Sell Computer Systems; R.S.C.
Wakefield — H. Claston

SCOTLAND
Aberdeen — Micro Shack
Annan (Dumfries) — Alec Biard
Edinburgh — R.S.C.; Hi Fi Repair Shop
Fort William — F. W. Patterson
Glasgow — R.S.C.

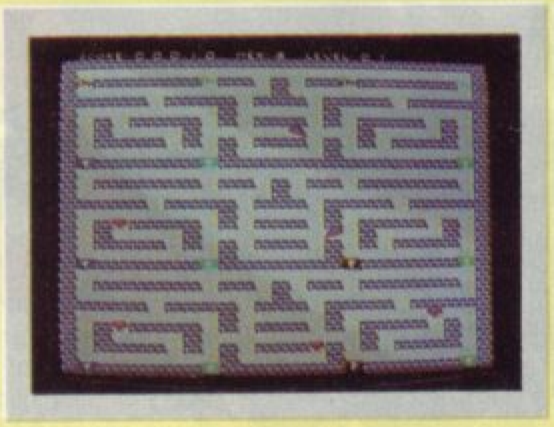
WALES
Newport — J. & P. White
Swansea — Telefix

AND OTHER LEADING HOME COMPUTER SHOPS

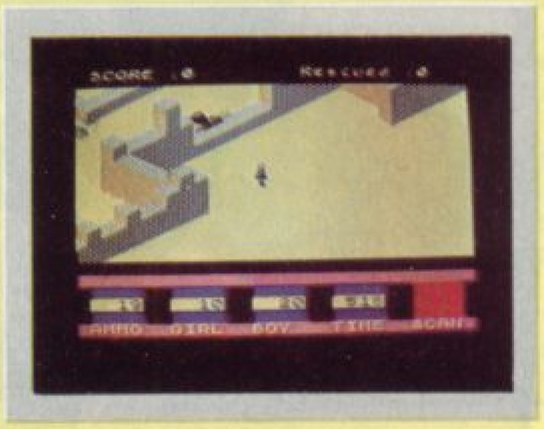




BARMY BURGERS



BEWITCHED



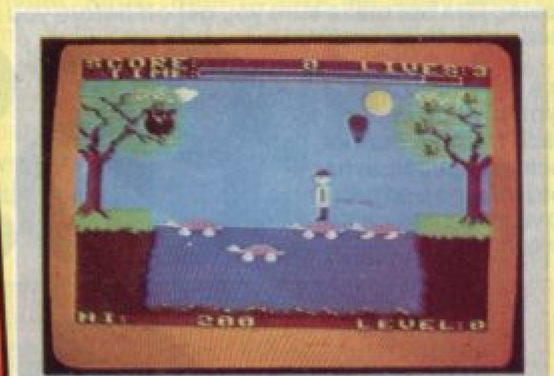
ANT ATTACK



ZALAGA



TUTENKHAM



PURPLE TURTLES

Welcome to our new improved reviews section! As you may have noticed we've moved our look at what's new and what's best in the world of games software up to the front of the magazine — where it really belongs. We hope you like the new look. Meanwhile back to the games! Our Game of the Month is Zalaga, a hot space shoot out for the BBC. You'll find our verdict on page 33. We also take a look at a brand new and very original game for the 48k Spectrum called Ant Attack on page 31. Did Imagine's Bewitched cast a spell over *C&VG*'s reviewer? Find out on page 31. Are the Purple Turtles really cute? Take a dive into their world on page 33. If you are a Commodore 64 owner. Fancy yourself as a race-ace? Then take the driving seat for Atari's new Pole Position conversion for their 400/800 and 600XL machines on page 31. Barmy Burgers are sizzling away for Spectrum food fans on page 33 and the tomb of Tutenkham awaits Vic-20 owners on page 31. Plus a few more thrown in for good measure as *C&VG* continues its search for the perfect game.



Amazing Chuckie Egg*†™

You have to collect 12 eggs and corn to finish the screen—but there are up to 4 nasty ducklings chasing you as you try to escape up the ladders. You can jump onto the moving lifts but make sure you get off before you smash your head against the roof.

The ducklings are on a fixed path but if you're good enough to reach frame 9, mother duck escapes from her golden cage and can move anywhere on the screen.

£6.90

NOW AVAILABLE FROM *W.H. SMITHS AND † Boots

SPECTRUM

DASHING DOUGGIE™ £6.90 ARCADE STYLE GAME Supersonic Dashing Douggie™ orbits the world delivering liquid nourishment. He must be quick to stop it getting cold.

CRAZY BALLOONS £5.75 ARCADE STYLE GAME It's a great balloon but ice crystal clouds are the menace. Narrow passages and high winds too before home base safety!

JUNGLE FEVER £6.90 (Ramwise TM) ARCADE STYLE GAME It's got everything, with an exotic horror array of nasty natives, man-eating spiders and crocodiles too.

KAMAKAZI £5.75 ARCADE STYLE GAME Based on the very successful BBC 'Planes' game, dive bombing Kamakazies fly down to destroy your base. Fast and slow options. Dexterity is the key to survival.

- ☐ **CHUCKIE EGG™*†** ARCADE STYLE GAME
- ☐ **DASHING DOUGGIE™** ARCADE STYLE GAME
- ☐ **CRAZY BALLOONS** ARCADE STYLE GAME
- ☐ **JUNGLE FEVER™** ARCADE STYLE GAME
- ☐ **KAMAKAZI** ARCADE STYLE GAME

PROGRAMS ARE ONLY AVAILABLE FROM AUTHORIZED DEALERS AND A&F SOFTWARE MAIL ORDER DEPT. POSTAGE AND PACKING FREE.

TOTAL CHEQUE/P.O. ENCLOSED OR CREDIT CARD NUMBER ____________

NAME ____________

ADDRESS ____________

A&F software

Unit 8, Canal Side Industrial Estate, Woodbine St. East, Rochdale, Lancashire, OL16 5LB. Tel: 0706 34111



PAC-MAN CASTS HIS MAZE SPELL

BEWITCHED

Bewitched didn't cast a spell over this reviewer I'm afraid.

I don't really want to put the game down because it has a lot of very good points, but I'm afraid I've had my fill of maze games populated with monsters.

The game, as I have said, is set in a maze. You are represented by a black key controlled either by keyboard or joystick. The joystick option is a much better bet because the game is nigh well impossible using the keyboard.

The aim of the game is to open coloured doors in the maze using your key. One small problem here the key must be the same colour as the door. Changing the colour of the key involves rushing to the top of the screen and passing through one of the four keys hanging there.

Even this doesn't guarantee success because doors often change into bricks in the maze wall.

Once you've opened the door at the bottom of the maze the screen scrolls upwards and you are faced with another expanse of maze to negotiate. There are 20 screens in all.

Considering the limitations of the unexpanded Vic 20 Bewitched, from Imagine, is quite a feat of programming. Maze games don't appeal to me but if you are a Pac-Man fan then Bewitched could be just your cup of tea.

● Getting started	6
● Graphics	8
● Value	5
● Playability	5

RACE ACES WILL LAP THIS UP!

POLE POSITION

Players of one of the year's most popular arcade machines can now sneak in an extra practice lap at home.

Following the release of Pole Position for the Atari VCS a few months ago, Atari has now packaged this game for their range of home computers. The new cartridge will run on a 400/800 machine and also on the new 600XL.

When you turn on the computer you are greeted with the familiar Pole Position scene. The clouds are still overhead and the horizon looms in the distance. The road has changed colour, though, from grey to black.

There is a choice of four circuits including a practice race for which you don't need to qualify. You can also set the race distance to anything between one and eight laps.

When you press Start, the Atari balloon pulls the "Prepare to Qualify" message across the sky. There is no speech in this version, however.

One of the most spectacular pieces of graphics programming from arcade Pole Position are the advertising boards which whizz past. These start in the distance as small specks on the horizon and get larger as they approach. The lettering and pictures on them gradually become more readable.

Unfortunately, although the boards have been transferred to this cartridge, the writing has not. They are completely blank which makes me question their importance to the game.

There is no accelerator in Pole Position. The car has a high and low gear which you can change between at will by either pushing or pulling the joystick. Direction control is with the left and right movement of the stick, and the fire button acts as a brake.

Although this system is quite usable it cannot compare to the large steering wheel which controls the original.

At the top of the screen a timer ticks slowly down to zero. If you can finish a lap before it does so, you have qualified for the race proper. You are then lined up for the start along with five other cars.

There are not really that many other cars on the circuit to avoid, compared to Activision's new Enduro game for the VCS where the object is to pass 300 cars in a certain time.

However, this is an excellent implementation of the original and I enjoyed playing it. The car graphics were a little unclear, but generally the game is very playable. Certainly worth the standard Atari £29.95 price tag.

● Getting started	9
● Graphics	9
● Value	8
● Playability	8

FINE TIME IN TOMBS OF TUT!

TUTANKHAM

Tutankham burst onto the arcade scene two years ago with all the promise of becoming a real ten pence piece guzzler.

It was the first game that effectively combined the elements of an adventure game with frenetic shoot 'em up gameplay. You play the part of Archie the archeologist searching King Tut's tomb for long lost treasure.

The treasure is protected by the mystical guardians of the tomb. These are an evil assortment of snakes, death dragons, crows, bats and flying cats against which your only defence is a laser gun with a limited amount of power.

The laser is only charged for a limited amount of time so you must find all the treasure and get onto the next tomb before this runs out.

You have five Archives with which you must penetrate the sixteen levels of the tomb. This is not easy and should keep you busy for several hours — I only managed to get to the third tomb after several turns.

The treasure itself is graphically superb from the red ruby rings belonging to Queen Nefertiti, blue sapphire studded amulets, to the most coveted treasure of all — the Death Mask of Tutankham.

As you explore the corridors of the tomb certain artifacts will appear that you will need to proceed like the map which shows you the way through the entire tomb, or the key which you will need to get through the doors connecting certain stages of the tomb.

Tutankham is a superb piece of software for the Vic-20 amidst the plethora of mediocre and poor quality titles being touted for this machine.

The game is available on cartridge form from Parker Brothers at a slightly prohibitive £29.95.

● Getting started	9
● Graphics	9
● Value	5
● Playability	9

AWESOME ANTS LEAP TO THE ATTACK!

ANT ATTACK

Holding my breath, I climbed over the wall and into the city. Good not an ant in sight. Spotting a lone figure on a pile of rubble and guided by her cries of "My Hero — take me away from all this" I started to lead her to safety. In milliseconds we were surrounded by an army of the nasty biting creatures and were eaten alive!

The deserted streets of Antescher are patrolled by hoards of man-eating giant ants who, guided by the scent of humans come charging to the kill. It is your job to get into the city, rescue the lone survivor and lead her out of danger.

Leaping and running from building to building is the safest way to search for the heroine as the ants can't reach you when you're perched safely above them.

Clustering around you in groups, you can blast them with a supply of grenades you carry — this will kill them but more soon come to take their place.

A scanner which flashes red

continued on page 33


THE SPIRIT OF CHRISTMAS PRESENT
YE OLDE COMPUTER SHOPPE
"Such a choice Tim, and so tolerably priced!"
What the Dickens
Micro and home computer systems, games and educational software, printers, monitors, peripherals and much, much, more...
MicroStyle
THE HOME COMPUTER PEOPLE
The Aylesbury Computer Centre Tel: (0296) 5124
The Daventry Computer Centre Tel: (03272) 78058
The Bath Computer Centre Tel: (0225) 334659
The Newbury Computer Centre Tel: (0635) 41929

Continued from page 31



or green tells you in which direction to search — a useful addition to the game as only a section of the city is shown on screen at any one time. The screen scrolls in whichever direction you move eventually revealing the furthest reaches of the city.

An additional feature to the game is the power to view your hero from four angles. Occasionally he'll disappear from the screen and to keep track of him, run through all the different view angles which will being him back on screen.

Another interesting effect is the 3D graphics. If you run behind a building you'll disappear from sight as will the pursuing ants. Cries of "Bitten" will appear on screen once the ants close in and if you don't want to be eaten alive you'll have to make a run for it.

In each new level you have to search further afield for the heroine and of course there is a much greater chance of getting caught as you try to find your way out of the maze of buildings.

The ants are horrifyingly lifelike as are the movements of your hero. The keyboard controls on the Spectrum are very well placed to enable the easy movement of your hero. Ant Attack is written in machine code and features high-res graphics which are among the best I've seen on the Spectrum, with hidden line removal.

Ant Attack is available from Hampshire-based Quicksilva for the 48k Spectrum at £6.95.

● Getting started	7
● Graphics	9
● Playability	7
● Value	7

BURGER TIME FOR FAST FOOD ADDICTS!

BARMY BURGERS

It's about time someone started a Society for the Prevention of Cruelty to Chefs' now that Burgertime is also available on a Spectrum.

Once again our intrepid hero is faced with the daunting task of completing the hamburgers.

The object of Burgertime, in case you've forgotten already, is to help the chef to make four burgers, which are displayed in layers on the screen and form walkways for the Chef.

WalKing over a layer makes it drop down onto the waiting bun below. You are chased around the screen by a vicious fried egg and a couple of mean sausages.

Defence against these meanies comes in the form of a pepper pot which has five shakes left in it. Peppering a nasty will paralyse it for a few seconds while you make your 'getaway.

This version for the Spectrum features three burgers instead of four, but the screen layout is still good.

The most annoying point about the entire game was the awkward layout of the movement keys. The game uses the cursor movement keys for control which can be confusing.

There are no bags of fries to collect in this game. These are available on the original and are useful as they boost your dwindling supply of pepper.

The version of this program currently available in the shops is version two, which has better graphics for the Chef, a title screen while loading and also a better routine for peppering.

After playing version one, which we have in the *C&VG* office, there are a couple of things which I think should have gone in version two. Firstly, all action stops while a layer of burger drops down a level, which can be annoying. There is also an awful mistake in the spelling of the game title itself which remains on screen at all times while you are playing. When I phoned Blaby about this and asked whether it had been corrected, they told me that nobody had noticed it before and that I was the first to complain.

Apart from all this, Barmy Burgers is a good game for any Spectrum-owning Burgertime fan. The cassette, from Blaby Computer Games, runs on a 48k machine and is available from W.H.Smiths. It costs £5.95.

● Getting started	9
● Graphics	9
● Value	8
● Playability	7

IT'S SHELL SHOCK ON FRUIT MISSION!

PURPLE TURTLES

With bated breath I stepped gingerly on to the turtle's back — suddenly it dived and with a loud splash I landed in the drink!

Purple Turtles is one of the cutest games I've seen for a long time. The object is simple — just cross the river, using the turtles as stepping stones, to retrieve the fallen fruit on the opposite bank.

However, life isn't always easy and in this case danger lurks with every step. The passive floating turtles are often overcome with a sudden urge to dive just when you are standing on them!

Once on the opposite bank, your man picks up a piece of fruit and retraces his steps across the river to a very hungry owl, sitting in his tree he gives you a rapturous hooting welcome! There are five pieces of fruit to retrieve in each level plus a time limit to contend with.

Each successive level becomes a little harder as more than one turtle will dive at the same time. Unfortunately, you can't change direction in mid-jump and so if a turtle dives you've had it!

There are nine difficulty settings and nine speed settings which make a dramatic difference to the game. I found it impossible on the high difficulty settings to jump my little man safely across the river as at some point all the turtles are under water at the same time.

Both the sound effects and graphics are excellent with a constant change of scenery in the background and all accompanied by a very catchy jingle.

Although not a game to set the adrenalin flowing, Purple Turtles has a certain addictive quality and I found it very enjoyable to play.

With keyboard or joystick control for the Commodore 64, Purple Turtles is available from Manchester-based Quicksilva for £7.95.

● Getting started	7
● Graphics	9
● Value	5
● Playability	6

TRUE TO THE ARCADE ORIGINAL

ZALAGA

Aardvark Software have come up trumps with their version of the arcade game Galaga.

Galaga, is based on a Galaxians theme but one that has been beautifully reworked to produce a game that's full of fast and furious action.

Aardvark's Zalaga remains true to the arcade original — apart from the name change. Nothing has been missed, not even the amazingly detailed graphics or the twinkling stars in the background.

The game begins with squadrons of aliens streaming past your laser base into formation. At this stage you can blast away without fear of retaliation, but once the creatures are in position they fire and dive at your base without warning.

Doubling your fire power is achieved by manoeuvring the ship under a ray that one of the meanies occasionally sends

Continued on page 37


COLECO VISION
DONKEY KONG
CBS COLECO VISION VIDEO GAME SYSTEM




CBS COLECO VISION™ VIDEO GAME SYSTEM
YOU CAN'T BEAT THE SYSTEM

Chosen from the most uccessful arcade games resently played in the States. No-one else can claim that.

Every single game has up o 4 skill levels for 1 to 2 players lus multiple screens.

So even know-all game wizards are in for some hairy experiences.

There are Donkey Kong, Zaxxon, Smurf, Cosmic Avenger, Carnival, Venture, Wizard of Wor, Gorf, Mousetrap and Ladybug. All demonly difficult. Definitely



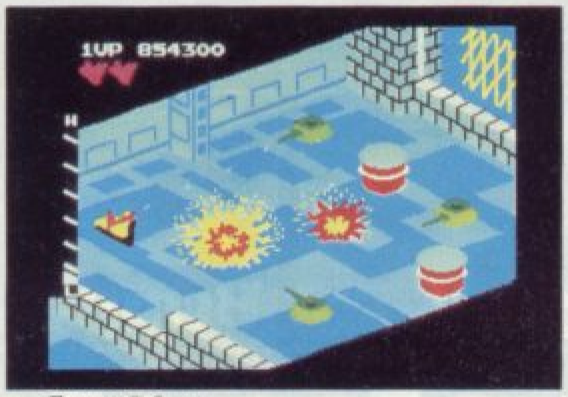
Expansion Module No. 2 with Turbo™ cartridge.

not for those with dodgy digits or weedy reactions.

More control at hand. The CBS ColecoVision hand controls are also specially designed to complement the games.

They give you full control over your game play with 8 direction joy stick, push button keyboard and two independent fire/action buttons.

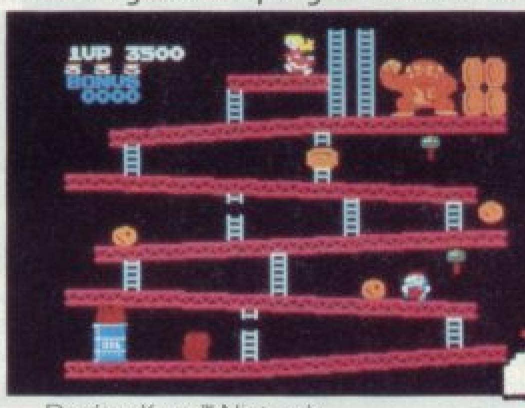
And more. The unique CBS ColecoVision Expansion



Zaxxon™ Sega.

Module Interface allows you to expand the use of your console and keep it right up to date with the latest developments.

Expansion Module No. 1 allows you to play the entire



Donkey Kong™ Nintendo.

library of Atari VCS cartridges.

Expansion Module No. 2 is a fully functional driving unit which includes steering wheel, dashboard and accelerator pedal.



Smurf™ Gargamel's Castle. Peyo.



It comes with the Turbo video game cartridge for exciting high speed racing.

And Expansion Module No. 3 (soon to be launched) will turn your CBS ColecoVision console into an advanced home computer, so you can tackle anything from maths homework upwards.



Whichever way you look at it, CBS ColecoVision is simply the most advanced video games computer system you can lay your hands on. On this planet, certainly.

So go and try one out at your nearest video games dealer.

N VIDEO GAME COMPUTER SYSTEMS.



The Lightening Oric Assembler. £9.90*

There are other assembler/editors available for the ORIC but none combine the same features and ease of use that we have obtained with this comprehensive utility program for the ORIC 48K. The manual which accompanies the assembler gives a brief insight into machine code and the use of assemblers to enable anyone to write in assembly language after just a little study. Full specifications of the assembler cannot be fitted into the small space available here and so they may be obtained from your local dealer or direct from Mr. Micro.

*Includes comprehensive instructions booklet.

Crazy Golf £6.90
48K Spectrum

Crazy golf is a new program for the 48K Spectrum you are required to clear the course avoiding and circumventing the many strange obstacles finally putting your ball in the hole. The par for each hole is displayed and a novel direction indicator combined with a force indicator enable you to send the golf ball in the direction you feel is the best one to clear the course. Crazy golf really is crazy but most of all it is fun and will be found to be very enjoyable by all members of the family.

For use with Joystick and keyboard.

Bengo £6.90
Vic 20

An exciting program for the unexpanded Vic 20, which combines fast moving strategy and reflex skills. You must control Bengo the super Eskimo against the dreadful snow Yeti – Half blind and half witted the Yeti can smell a good Eskimo lunch – the only protection Bengo has is to hurl huge blocks of ice across the frozen waste at the Yeti.

– Don't get distracted – or you'll be personally responsible for the demise of an Eskimo!

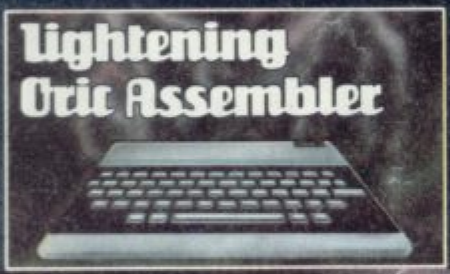
For use with Joystick.

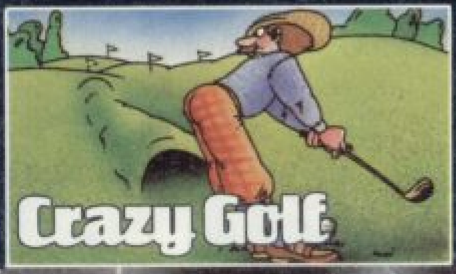
Dracula £6.90
48K ORIC

A superb adventure for the 48K ORIC. This adventure is written in the good old style! No silly graphics, no gratuitous drawings, no distractions from pure mental images of horrendous realism. This evocative text adventure of the old genre will have Oric owners shivering with anticipation and perhaps fear.

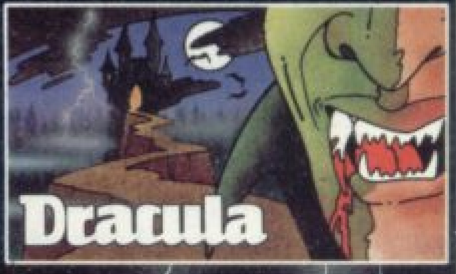
Dare you load DRACULA into your ORIC 48.?!!

By keyboard.





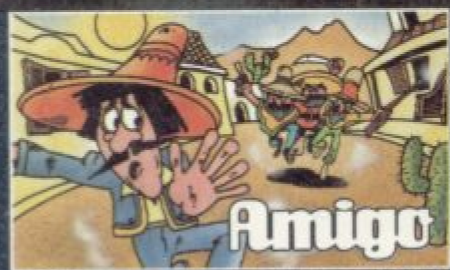


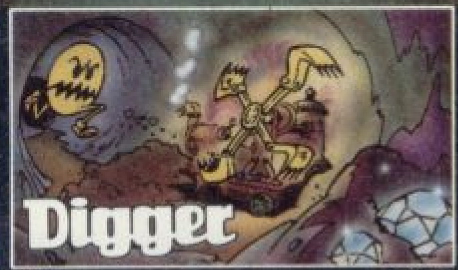


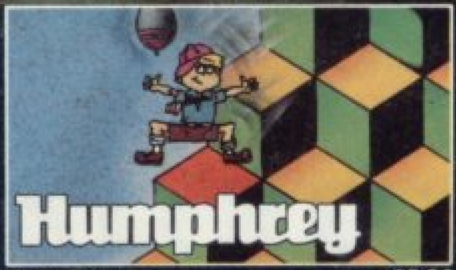
No shocks– Plenty of surprises!

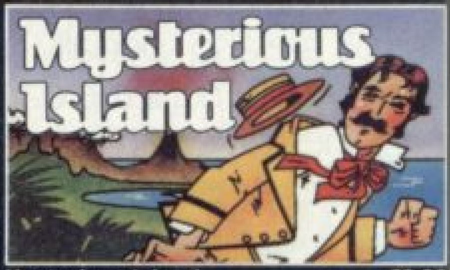
Mr. Micro means programs you can trust. Programs that are as exciting when you load them as they look at your dealer. Programs that come proven and refined. Programs that bring you the breathtaking excitement of arcade games with the special extra dimension of real mental challenges – all at the right price. Plus accessories and utilities which extend the value of your computer. Ask for Mr. Micro by name at your local dealer. Or order your games direct, post-free, from: Mr. Micro Ltd. 69 Partington Lane, Swinton, Manchester M27 3AL. Cheques should be made payable to Mr. Micro Limited. Ring our 24 hour hot-line for payment by Access or Visa on: 061-728 2282.

MR. MICRO









Amigo £6.90
Vic 20 8K or 16K expansion.

Hey Amigo you gotta run fast ah. The banditos they are a chasing you and they will a geta you ifa you do nota escapa OK. You musta runa rounda the blocka, when you run roundde corners ofa de city the banditos they are frightened to go there and you score de points. Pity you have nota gota gun but a joystick can be fun.

For use with Joystick.

Digger £6.90
Vic 20 8K or 16K expansion

Your remote viewer shows the path of the professors devilish digging apparatus. Using your computer linked remote control you must guide the digger beneath the earth to collect the rare micronite gems. Unfortunately the micronite is protected by the micronits who will plague your machine in order to attempt to stop its progress. You may be able to kill the micronits by skillfully manoeuvering your digger beneath a subterranean stalactite which will then fall killing any micronit in its path. This is a novel implementation of a popular arcade game. For use with Joystick.

Humphrey £6.90
Vic 20 BBC Model B

This new game for the BBC Model B or for the VIC 20 (8K or 16K expansion) and also for C.B.M. 64 involves some tricky decision taking.

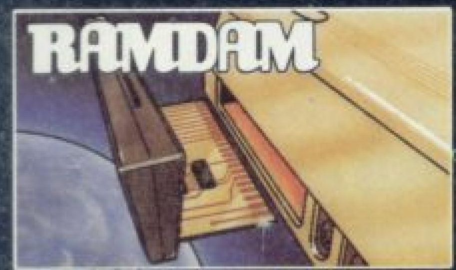
Object of game is to make Humphrey land on all the cubes thus changing their colour. Unfortunately Humphrey is being chased by a bouncing ATOMIC BOMB! You will soon learn that this deceptively simple game has tremendous addictive properties and quite a high degree of tactical skill.

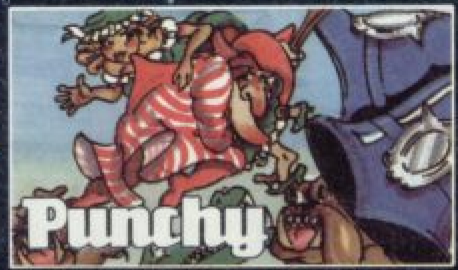
For use with keyboard or Joystick.

Mysterious Island £9.90
Vic 20 16K

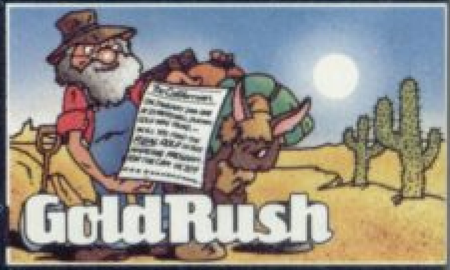
Escape from prison in a hot air balloon – try to land it on Mysterious Island, then the fun really begins. • Booby Trapped Fields • Killer Bees • Hostile Natives • Hidden Clues • Force Fields • Capture the Nautilus • Full Graphic Display • Several Games lead to Exciting Climax • Separate Practice Program • Includes Blank Data Tape to store the game to play later.

All successful adventures can claim a unique personalised award by sending Mr. Micro their final position at the end of the game – By Joystick or keyboard.









RAMDAM £13.90
Vic 20

This accessory enables programs which would normally only work with 3K expansion to work with 8K or 16K expansion. RAMDAM saves having to buy a 3K pack if you already own an 8K or 16K. With RAMDAM and a Commodore 16K expansion all known tape games will run on your Vic 20. • Includes Memory Test Program • Free 6·5K game – MICROVADERS for use with Joysticks.

Punchy £6.90
Spectrum 484

Punch has taken Judy for his evil purposes and locked her away. Judy has called upon the forces of goodness to escape, so with the help of our hero Bobby the policeman and you the purchaser of this fine program you must guide brave Bobby across the stage to rescue poor Judy. Leap the gaps. Jump over the dogs. Leap the alligator pit. Dodge the tomatoes. Rock the crib. Collect the sausages and finally rescue Judy. By Kempstone joystick or keyboard.

Dragon Tamer £9.90
Dragon 32

Allows Atari type and other digital joysticks to be used with the Dragon – giving better response and more control. For the first time your Dragon will be able to reflect your true skills. • Achieve higher games scores • Less Frustration.

Plus To ensure maximum value, Dragon Tamer includes two original games for use with digital Joysticks.

Goldrush £6.90
Vic 20 3·5k

This graphic adventure program was the first in the world to offer real gold for the successful adventurer. An idea which has been much copied but never equalled, • Fun • Educational • Challenging • Clues • Puzzles • Searches • Fast Reaction Game. For use with keyboard.

continued from page 33



down. This links up two bases but this never lasts long because it's difficult enough to keep one base out of trouble let alone two.

The game climaxes with a challenging stage where an army of Zalagans swirl across the screen. Sharp shooting is rewarded by big bonuses.

I can recommend Zalga without any hesitation. I rate it as one of the best shoot-em-ups on the market and well worth your attention.

Zalaga is for the BBC 32k machine and is available from Essex based Aardvark Software costing £6.90.

● Getting started	8
● Graphics	8
● Value	9
● Playability	9

GALAXIANS HAVE GONE BATTY!

BAT ATTACK

Galaxians have gone batty with squadrons of galactic flying bats! The layout is a five by six formation of galactic bats that swoop down dropping bombs.

Your task is to destroy the fleet without losing all of your initial three lives. About 75% of the graphics screen is donated to the playing window.

Along the side is printed your score, hi-score, remaining ships and current level. Your ship's movement is controlled not by joystick but by the keyboard keys "Z" and "X" for direction, and the shift key to fire missiles.

As the game starts, the bats flutter and small attack wave formations swoop down. The implied diving motion is very simple, not up to the usual intricate patterns incorporated into some of the other Galaxian type games.

The ship's movement is also very bad being far too slow. The rather large and slow missiles launched from the protector ship move in dead straight lines. I tried to "curve" the shot by moving while shooting, but this had no effect.

Once a screen of bats had been completed, a rather raucous space ship sound occurred followed by a series of flying "doughnuts"! This is where C&VG's bug hunting device activated itself to disclose a stupid bug.

Bombs from the previous screen in the process of falling were not cleared, but frozen and displayed in the subsequent screen.

You can't blast the "doughnuts" — you just have to dodge. This is very difficult — and sometimes impossible if a horizontal string of doughnuts is descending!

Another annoying characteristic of this screen is that two ship width sized margins are imposed on the left and right of the playing area — restricting movement.

Apart from that, the "doughnuts" do have very realistic spinning simulations. After this, the next level ensues with faster and more difficult action, alternating between flying bat and spinning "doughnut" screens!

Bat Attack is available from Sheffield based Alligata (Superior Systems), for the Commodore 64, at £7.95.

● Getting started	8
● Graphics	6
● Playability	7
● Value	6

STRANGE, THESE QUARKS

STIX

One unique arcade game that never really took off in the arcades is Stix.

The "Stix" is a bundle of energy, represented by elaborate graphics lines that whizz round the screen. Your job is to harness the stix avoiding destruction. This object is achieved by filling 75% (or more) of the screen, avoiding the hazards that lurk.

You control the construction of the force field synthesiser by use of joystick, creating squares, rectangles and other shapes within the force field perimeter.

Each block or shape created restricts the movement of the stix giving you more opportunity to corner it — for maximum points. When a field has been constructed, it is automatically shaded. On the larger areas, this process is rather slow, using a "FILL" command.

There are two speeds in which construction can be made. These are accessed with the joystick fire button either pressed or not, and are visibly differentiated by red or blue shadings — on earlier levels. The slow speed doubles your points but increases risk of being wiped out by the Stix.

As mentioned, there are certain hazards to beware of. If the Stix touches a partially constructed field, it will be destroyed due to the molecular transposition! Some nasty looking quarks and anti-quarks patrol the force field perimeter devastating everything in their path! The third hazard is unfortunately a software design fault, which the manufacturers have admitted to and promised to rectify in later production! The problem is that any hesitation whatsoever while constructing a field, results in a rippling wave to penetrate the field, following your construction field directions, and annihilating the synthesiser. However this can be avoided by finishing construction before the wave gets to you!

I found the movement of the synthesiser awkward at the top left hand corner of the field perimeter. Once a screen has been completed, consequent levels ensue with faster, more complex action.

Although the game was exciting to play, I feel this particular version will have to iron out its mentioned defects to become a games players' favourite.

Stix is available from Supersoft for the Commodore-64 computer, at £8.00, plus VAT.

● Getting started	8
● Graphics	7
● Value	7
● Playability	8

MAD MAX TAKES TO THE AIR

BLUE MAX

It's a case of Reach for the Skies in this Battle of Britain game for the Atari.

You play the part of Max Chatsworth, known to friends and enemies alike as the Blue Max. Your mission is to rid the skies of danger, and generally to make the world a safer place to live in.

Once the game has loaded, pressing the start key will clear the screen to show your plane and the runway. Your aircraft is quite small, made up from just one character.

The plane will taxi automatically and you must take off before you reach the end of the runway. You cannot leave the ground unless your speed is over 100 mph.

Once airborne, you must destroy the enemy cities below. You have 30 bombs and an unlimited supply of bullets. Bullets are fired by pressing the button on the joystick, and if you pull back on the trigger at the same time then you will drop a bomb.

If you pass over a friendly runway then you can land on it. In fact you will have to land to have your tanks refuelled and your bomb store replenished.

Landing is not too difficult, as long as you can remember to come down slowly.

There is a number of options which you can select to make the game easier to control. For example you can reverse the controls on the joystick so that pulling up will make you either climb or dive. You can also introduce gravity so that releasing the joystick will cause you to dive instead of just hovering.

If you like the idea of a game based on the Battle of Britain

continued on page 39

continued from page 37

then you'll enjoy playing Blue Max. If the whole idea isn't your cup of tea then you'll easily find another program to spend £29.95 on. Blue Max runs in 32k on an Atari 400 or 800.

● Getting started	8
● Graphics	8
● Value	8
● Playability	8



CAUGHT OUT ON THE GRID!

GRIDRUNNER

One of the first arcade games to be available for the Commodore 64 has now been transferred to the Spectrum.

Designed by Jeff Minter, this Spectrum version is written by Salamander and marketed by Quicksilva!

Confused? You won't be ... Read on.

Gridrunner is similar to Atari's Centipede, but set on a grid of squares which covers the screen. There is also a computer-controlled laser which shoots at random from the side of the playing area.

The idea is to destroy the animal, but it splits into pieces as you shoot, until the screen is full of small aliens sweeping down towards you.

The game runs on a 16 or 48K machine. When the tape has loaded, the screen shows the title of the game and the current high score. There are no instructions printed on the cassette inlay, so I had to press every key to find out what to do next. The 0 key is used to start, while Q, A, I and P are used for movement. This is a lot easier than the 4 cursor keys as used on many other games.

The graphics are excellent, and are as good as if not better than those on the 64 version.

The Centipede splits into a number of fragments, each of which seems to rotate on its own. Movement is very fast, and the game is quite difficult to play. All in all Gridrunner from Quicksilva is quite an addictive game to play.

The game runs on any Spectrum, and is available from Quicksilva. It costs £6.95.

● Getting started	5
● Graphics	8
● Value	8
● Playability	7

GORILLA KEEPS ON CLIMBING!

KONG

Donkey Kong games are as vital to the games players library as Space Invaders and Pacman. Putting it bluntly, your collection 'ain't worth a dime unless you've got a tape with a crazy gorilla and cute Italian carpenter battling it out for the hand of a lady.

When buying classic games it's important to get a good version.

Donkey Kong-type games are no exception to this rule and one new micro which will undoubtedly have several versions available is the Commodore 64.

One of the first of these games to come in for the *C&VG* gorilla-bashing test session is Anirog's Kong. The game scores highly on graphics making use of the 64's vivid colours — most arcade-like.

The high standards in graphics were unfortunately not matched in game play. It was very difficult to make Mario jump over the barrels and at various stages in the game the character steadfastly refuses to take running jumps.

The game makes good use of the 64's ability to create very smooth scrolling graphics — the movement of Mario and the ape being very smooth indeed.

Its a pity this smoothness of movement was not matched with more careful animation. This is at its worst in the running motion of Mario who hobbles along as if with a limp.

A reasonable version of the arcade hit although I couldn't help feeling it could have been a lot better. In the shops now at £7.95.

● Getting started	8
● Graphics	5
● Value	5
● Playability	5

THE WEIRD GAMES WE PLAY!

POOYAN

I sometimes wonder how much computer programmers and designers drink. Judging by the weird themes and ideas in most computer games these days it must be quite a lot.

Pooyan is definitely one of a new wave of "imaginative" games, well I'd certainly call parachuting wolves different.

The intrepid wolves leap from a tree top opposite Pooyan, in an attempt to glide down to the ground.

You control Pooyan who sits in a basket dangling by a rope from a cliff top. Your job is to burst the helium balloons the wolves are using, with your trusty bow and arrow, to protect Pooyan's family of piglets.

The wolves aren't defenceless although they will occasionally launch a volley of acorns at Pooyan's basket.

If you let any of the wolves reach the ground they'll climb the ladder next to the rope and try to bit it in half.

Another line of attack you can employ is the magic arrow. This appears at the top of the cliff and disappears rapidly too if you don't get to it quickly. This arrow is much more powerful than usual and can kill several at a time. However it becomes much more difficult in later sheets to collect it as there can be anything up to ten wolves trying to bite the rope.

The first level is completed once you have killed 32 wolves. The next level takes in the Wolves' Lair. The beasts have changed direction and are now being lifted to the top of the cliff. If more than seven reach the top they'll push a rock over the edge which makes a very nasty mess of Pooyan.

I can find absolutely nothing to criticise in Pooyan. The graphics have to rate as one of the best available for the Atari. The game is very playable and addictive. All Atari owners should make an effort to look at Datasoft's Pooyan.

● Getting started	8
● Graphics	9
● Value	8
● Playability	9

MAURICE AND THE BIG BOYS!

MAURICE MINOR

Maurice, the Morris Minor took a wrong turning one day while out for a drive. Finding himself in the middle of a Grand Prix instead of a quiet country road, he enters into the spirit of things and takes on the racing cars at their own game.

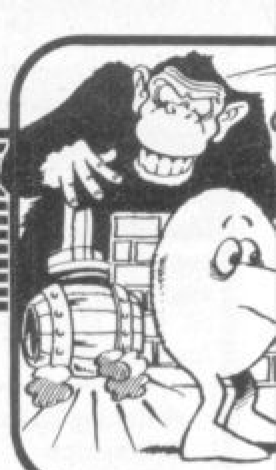
Maurice Minor incorporates six difficulty levels, a display grid showing the level of damage and Hall of Fame.

In each level the speed of the game increases — you could take it easy and start as a Sunday Driver or jump to the other end of the scale as the King Pin where, I assure you, Maurice really shifts!

I found it impossible to get anywhere in the faster levels due to the failings of the Dragon joystick. Maurice is very sluggish in answering the controls and it's impossible to keep him travelling in a straight line.

One real gripe — while we were playing Maurice Minor the program crashed three times for no apparent reason! Maurice Minor is available from Leeds based J Morrison Micros for the Dragon 32 at £6.95.

● Getting started	8
● Graphics	5
● Value	4
● Playability	3



COMPUTER OR VIDEO GAMES?

Computer keyboard add-ons are here at last and *C&VG* has got its hands on two of them to test them out before they go into the shops. Will they offer serious competition to the micros?

The VCS keyboard is manufactured by Spectravideo — the makers of the Spectravision range of cartridges. 2k of computer memory can be used to write your own programs — which can then be stored on cassette tape by connecting the VCS to a tape recorder with leads supplied.

The Compumate also has 16k of computer memory built in to perform a number of other functions. These include a music capability which can simulate the sound of piano and organ, has four built in tunes, and enables you to write and edit your own compositions, then play them back or store them on cassette tape.

Also built in is the Magic Easel graphics drawing system which enables you to draw in up to ten colours and run six different screens at a time to create an animation effect.

Main reason for buying a Compumate is to learn to compute and start writing your own programs. The Compumate is ideally suited to do this as it uses the most popular home computer language — Basic.

An instruction manual provides a step by step guide to the keyboard and also takes you through a few simple programs.

The keyboard itself is touch sensitive with cushioned pads that click when depressed to acknowledge the keystroke.

The Compumate sits on top of the VCS and is connected to it through a cartridge which slots from the keyboard into the cartridge port.

All necessary leads are supplied with the Compumate which is available now from Silica Shop at £49.95.

INTELLIVISION DO IT TOO

The Intellivision keyboard is finally here — no less than two years after it was promised to Intel owners. We discover if it was worth the wait.

Despite the delay and if you still want to get into computing and haven't already bought another home computer then the Computer adaptor and keyboard will enable you to do just that.

For your money you get two boxes — a large square box which plugs into the cartridge port and the keyboard itself.

Styled in the same black plastic of the console though with sharper, more angular corners.

The keyboard has full moving keys laid out in standard typewriter fashion.

As with its Atari counterpart — the Computer Adaptor comes complete with Manual. The keyboard also has a built in colour-coded Basic tutor to augment the manual.

Like the Compumate the Intellivision keyboard has 2k of computer memory for writing your own programs. These can be saved on cassette tape by connecting machine to a tape recorder. The recorder also enables you to reload programs into the machine.

The add-on uses a hybrid form of Basic which enables you to access the sophisticated graphics controls of the main console.

The main disadvantage of this is that it takes the beginner away from normal Basic — as employed in other home computers.

For real computer buffs the Mattel Aquarius printer is also compatible with the keyboard if you want to have paper copies of your programs.

The Intellivision keyboard and adaptor are in the shops now at £89.95.

THE SUPER STICKS . . .

The super new Cynex remote control joysticks featured in our July issue have now been slashed in price to a more competitive £34.95.

Originally priced at a hefty £70 the sticks were beyond the reach of most gamers.

The new price at just £5 more than an average cartridge should put the sticks within most people's reach.

Remote control game play has been made possible by the development of a unique radio chip — which enables you to move objects around the screen without wires cluttering up your living room.

In our August issue we asked you to sort out our jumbled joysticks for your chance to win a set of Cynex sticks. And at last we can announce who won!

Lucky winners of our prizes — generously provided by Cynex's UK representatives — Omega Enterprises — are:

Simon Cawley of Keynsham, Peter Evans of Wolverhampton, Philip Hicks of Broxbourne, Herts., Malachy Devlin of Cookstown, Co. Tyrone, Scott Corbett of Aberdeen and Darren Jones of Port Talbot, Wales.

Our eagled eyed winners were the first to spot that of the crossed wires drawn for us by artist Ross Collins. Wire C was the one the bemused player should have chosen to get at his joystick.

Our congratulations to all the winners.

THREE FOR THE COLECO

Stand back . . . for the launch of hi-quality, modestly priced video games!

The first will drive you up the wall — or drainpipe — with excitement! You play the role of Frantic Fready the fire fighting bug! Your inevitable task is to extinguish a series of fires in a multi-story building by firing snowballs through the blazing windows!

One dangerous hazard is the falling fireballs which burn you to death on contact. Each flame takes about five snowballs to put out!

On consecutive levels the action really hots up! You may now climb the drainpipes to higher levels and shoot left or right. If you see two flashing doors you may enter one and reappear out the second!

Several stranded cats on each level appear at the windows and try to jump to safety!

If you don't catch these you will lose one of your three lives — shame you're not a cat! Extinguished flames start to regenerate themselves and wander over the screen in order to smother you to death!

Does anyone like Galaxian-type games with a difference? You do . . . well the next two will interest you.

The first — Super Cross Force — shows a hi-res colour graphics display of deep undiscovered space — where no reader has been before. Several planets fill the screen.

You control an infinitely powerful galactic cathode and diode blaster, which when operated causes a deadly high voltage spark to jump across. The terminals are placed top and bottom of the screen. The aliens appear in squadrons wirling and circling in formation attempting to destroy your blaster.

You must dodge the missiles and electrocute invaders as they cross your range. Unfortunately the spark drains your fuel supply. This may be filled by shooting descending parachutists!

The game incorporates three unusual options, parallel, diagonal and dual. In parallel mode the terminals move simultaneously. Diagonal mode causes terminals to diverge thus producing a diagonal spark. Dual mode is for two players, each controlling one of the terminals!

As usual each consecutive level increases in difficulty as you progress through the game.

The other Galaxian-type game — Spectron — shows a futuristic picture of an Earth defence base. The aliens appear in six by three formation and swoop down dropping bombs on your missile launch area.

Your only protection is a narrow force field which deteriorates under alien attack! Bonus points are scored by hitting the space ship that flies across the top of the screen!

All three games are for one or two players and are available from Silica Shop for the ColecoVision system at £19.95 each.



GAMING

SAVE THE STRANDED MOON MINERS

Moonsweeper, a shoot-em up arcade style game has arrived at last! How long can you survive the attack of marauding aliens while you rescue six stranded miners?

Your aim is to fly a space craft to a distant planet in the outer reaches of the galaxy and rescue six stranded miners who are desperate to start digging on another planet.

Whizzing through space you'll need all your wits about you as you come under attack from alien craft and UFO's who want nothing more than to see you go down in flames. After docking on the miner's planet the pace hots up as you are blasted from all angles.

Using your firepower, blast your way off the planet and enter the time tunnel which will lead you and the miners to safety and the completion of your mission. The game reverts to the beginning at this point but rescuing the miners gets progressively harder on each new level.

You can accelerate and decelerate your spacecraft by pushing forward and pulling back on the joystick to dodge the aliens.

Moonsweeper should have arrived on the shelves well over a month ago but due to production delays in converting the game to the UK PAL system, the game will now be here by December.

Moonsweeper, by Imagic, for the Atari VCS, will be available from all leading retail outlets at £29.95.

TOP TEN	
1	**Pole Position** Atari
2	**Enduro** Activision
3	**Battle Zone** Atari
4	**River Raid** Activision
5	**Donkey Kong** CBS
6	**Galaxians** Atari
7	**Tutenkham** Parker Bros.
8	**Pitfall** Activision
9	**Centipede** Atari
10	**Phoenix** Atari

FAREWELL TO SPIKE'S PEAK

Spike's Peak and Ghost Manor, one of the new breed of double-ender cartridges by Xonox was to have been available in the UK by Christmas.

However you won't see the double-enders by Xonox on the shelves this Christmas as K-Tel, the record people will no longer be acting as distributors for the firm in the UK although they are still handling the distribution in the States and Europe.

K-Tel say: "We have decided not to go ahead in the UK." Apparently so many setbacks were experienced in the States with production problems and power conversions that it is unlikely that the cartridges would have arrived in time for Christmas.

In Spikes Peak you pull on your mountain boots become a mountain climber, braving man-eating polar bears, vicious eagles and the ever present danger of landslides and avalanches. Or if the fancy takes you can enter Ghost Manor and try to rescue your friend from the wily clutches of Dracula.

Our reviewers had a sneak preview of these two games — and we're afraid they got a resounding thumbs down from the team!



SPIKES PEAK



GHOST MANOR

SOFTWARE PIRACY

In the continuing fight against piracy, Atari has successfully brought another case to the law courts.

The three defendants charged with piracy on October 25th were the latest in a number of people taken to court by Atari over the last few months.

The charges included injunctions to stop the infringement of Atari software and also to stop the defendants passing off any software as the original Atari item. They will also have to deliver up all infringing software and items such as documents, bills and invoices.

This case of software piracy was brought to Atari's notice by adverts placed in magazines and journals.

The adverts offered Atari cartridges and disc based software at a fraction of the retail price. In some cases the games offered had not been released in the UK but were available only in the States.

The result of the case fell in Atari's favour with affidavits being sworn by the defendants undertaking not to copy Atari software. Atari have also been awarded court costs which are likely to be substantial and the defendants have accepted damages which are nominal — £300 to be paid to Atari.

Not wishing to discourage potential programmers, Atari have decided on a softly-softly approach to the problem of piracy. Once a cartridge or disc's protection has been broken, the machine code subroutines of the program can be viewed. There are many who learn in this way by looking at a game's routines and the techniques used to see how the program works.

However, the end result is sometimes misuse with a few people carrying the procedure one step further and copying the games to sell for commercial gain.

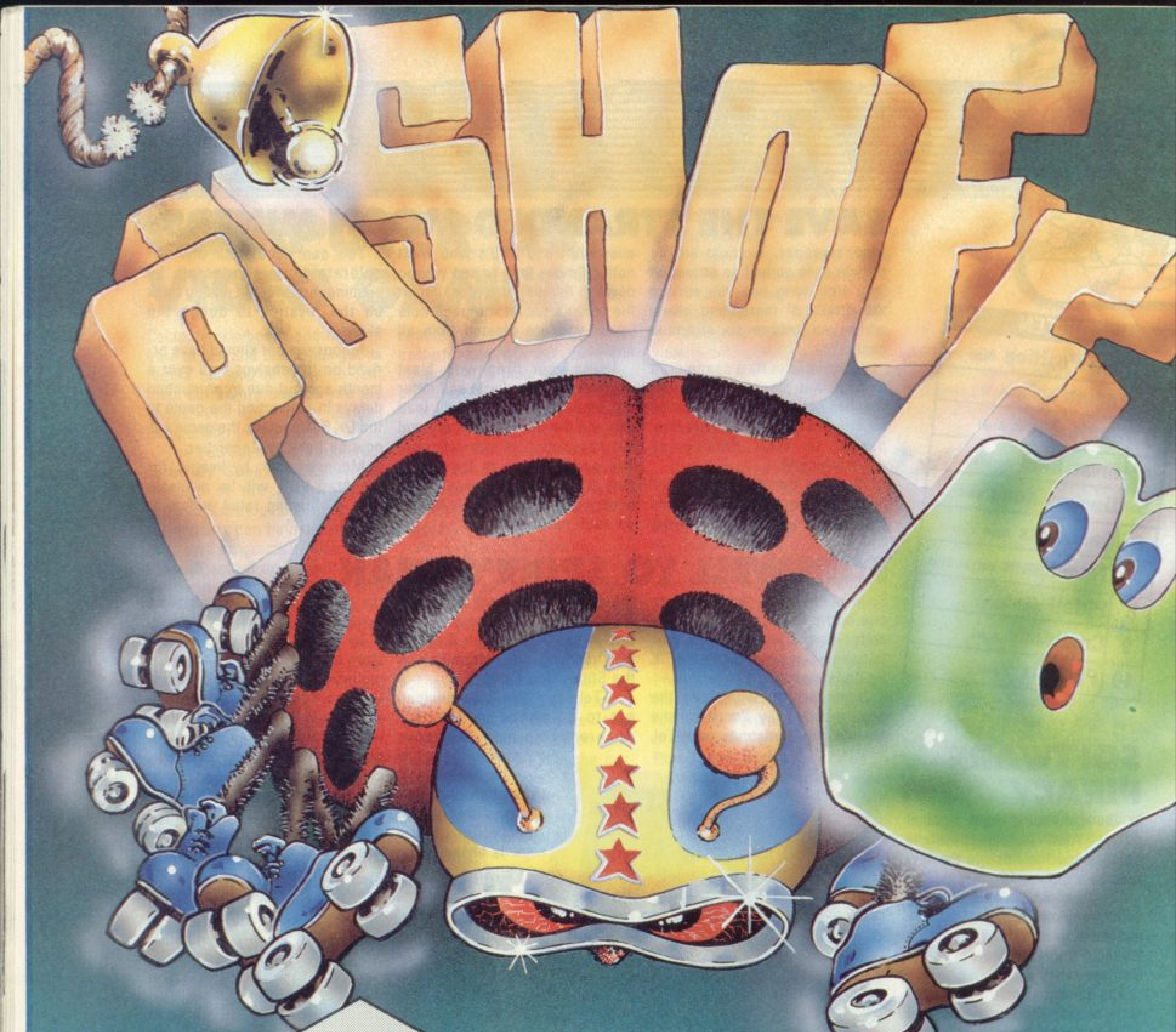
Atari's viewpoint is that the copying of a copyright program for whatever reason is illegal and they stated, "As far as the small pirate is concerned, we don't want to use an extremely large amount of muscle to crack a small walnut."

Atari would much prefer to see the time, effort and money used to catch the pirates diverted to more important aspects such as as lowering the price of software.

● What do you think about software piracy? Why not drop us a line and express your views. Write to Mailbag, *Computer and Video Games*, Durrant House, 8 Herbal Hill, London EC1R 5EJ.

COMING SOON!

Who is Professor Video? What is his mission in life? How can he help you get bigger scores when you play your favourite game on your home video game system? Watch these pages for the arrival of the mysterious Professor Video!


PUSH OFF


Crazy Balloon
CRAZY BALLOON
COMMODORE 64
Manoeuvre your hot air balloon around the skies avoiding all the hazards. Pick up bonus points along the way and experience the thrill of flying around in a balloon. 100% high resolution machine code using the CBM 64 to its best. Sorry only 26 levels.
by Chris Lancaster
£7.95
SPACE JOUST
VIC 20 UNEXPANDED
Arcade action for the unexpanded Vic 20. Manoeuvre your space craft around the screen avoiding waves of enemy space ships, meanwhile trying to destroy them by landing on them from above, also can you destroy the pods before they return to destroy you.
(Joystick only).
By Ian York
£5.95
DEALER ENQUIRIES TO:
TIGER DISTRIBUTION,
4 VICTORIA ROAD,
WIDNES,
CHESHIRE
051-420 8888
DISTRIBUTORS CONTACT:
SOFTWARE PROJECTS,
BEAR BRAND COMPLEX,
ALLERTON ROAD,
WOOLTON,
LIVERPOOL L25 7SF
051-428 7990



VIDEO



WIZARD FUN IN NARZOD!

Vectrex owners are in for hours of thumb numbing action as they seek to penetrate the walls of the Fortress of Narzod.

This game is guaranteed addictive and, if you've got things to do, not to be recomended.

Its a big enough strain to stop playing for long enough to write this review — to say nothing of answering the telephone, going to work, or eating three square meals a day.

The cause of all this trouble is a particularly nasty brood of demons in the employ of the evil wizard — Narzod.

Toughest of these henchmen are the Warbirds, Ghouls, and Mystic Hurlers.

As the last of the good wizards you must fly your hovercraft into the fortress and destroy the wizard.

The roadway to the castle is divided into four sections each with its own band of creatures.

Your hovercraft is capable of rapid fire and you can also bounce the bullets off the walls — but take care as sometimes the bullets can bounce back and hit you.

One you have destroyed all the creatures in one sector, a notice will flash up on the screen — "You May Pass". To do this you take your hovercraft up to the top of the screen with the joystick and through the tiny door to the next level.

Each level is tougher than the previous one and you will have to blast your way through four sections to get to the The Fortress.

Once inside the fortress you will be bombarded with Spikers from the Mystic Hurler. This is the toughest test of all and you will have to register six direct hits on the Mystic Hurler to kill it.

The irresistable attraction of Narzod is due to your curiosity to get into the fortress and get a glimpse of the wizard. In the process the game also gives you a super fast shoot 'em up!

THE VERDICT.
The most frenetic shoot 'em up yet on the ever improving Vectrex.

- **Action** ⊥⊥⊥⊥
- **Graphics** ⊥⊥⊥
- **Addiction** ⊥⊥⊥
- **Theme** ⊥⊥⊥

DUNGEON CHALLENGE

Dungeons and Dragons takes an evil swist in the Treasure of Tarmin. Mattel's D&D games have proved a real hit with Intellivision owners and this third cartridge will be no exception.

The action takes place inside the tunnels and corridors of the Island of Tarmin.

Deep inside the fortress lays the priceless treasure — guarded for decades by the forces of evil.

To recover the treasure you will have to avoid being killed by giant ants, scorpions, snakes, dragons, ghouls and wraiths that inhabit the fortress.

A three dimensional simulation of movement is created as you move down the corridors with doors and walls looming in front of you. Similar to 3D maze games.

Finding you way around the corridors is one of the toughest parts of the game and you would do well to take a tip out of the Adventure gamers book and keep a pen and paper by your side to note down certain key locations.

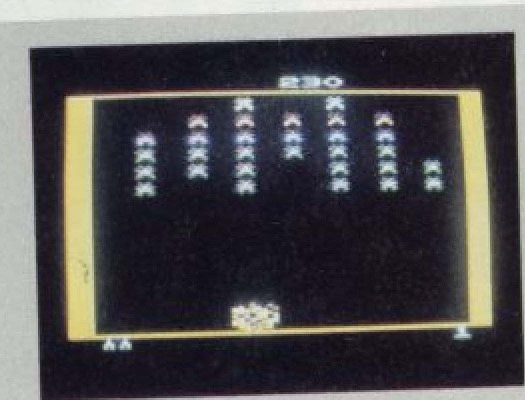
As you travel you will find certain artifacts in the corridors which can help you against your enemies.

Only six of these can be held in your pack at one time so you must keep a constant check on the suitability of the objects for each stage of the game.

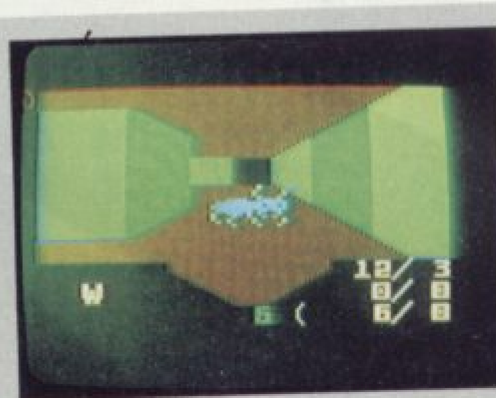
In order to attack you need to be holding a magical item or weapon in your right hand. Sometimes these will vanish in battle so it is wise to keep a few weapons in your pack.

Each encounter with an enemy will cost you a certain number of points so you have to check your score before and after the fight.

There are some useful items scattered throughout the corridors, as well as all the ghouls, like the ladder — which you can use to climb through into the next



GALAXIANS

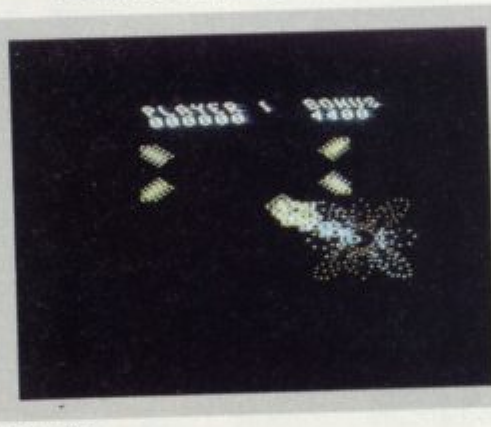


TREASURES OF TARMIN



TERRAHAWKS





SPACE FURY



level or the Eye Mural which enables you to see what lies ahead.

There is a lot to this game — both in terms of video games fun and intellectual challenge.

For those of you who already own D&D games it is a must but for those of you who don't it is also an excellent game in its own right.

THE VERDICT.
No better Christmas present for an Intellivision owner.
- **Action** ⊥⊥⊥⊥
- **Graphics** ⊥⊥⊥⊥
- **Addiction** ⊥⊥⊥
- **Theme** ⊥⊥⊥⊥

WELL PLAYED GALAXIANS!

Atari it seems are having trouble finding arcade games to convert for their VCS. Galaxians, a new release, although a great game is well past its heyday.

Apart from my qualms about the age of the game I think Atari have outdone themselves on Galaxians by producing a top rate game, and I have to admit to being pleased with the vast improvement in the quality of Atari's software over the last 12 months.

The game is a straight copy of the original. It has all the different meanies of the real machine and the kamikaze diving actions too. The swooping aliens have a real turn of speed which will test even the most experienced of Galaxian experts.

The display is neat and very colourful. The graphics are close to the arcade machine and fast with none of the awful flickering which spoilt Atari's Defender.

One small criticism of the cartridge. In the early stages the game is very easy — but after a while this position is reversed and swarms of aliens are thundering down at your laser base.

Galaxians is a classy reproduction of the arcade game and one that deserves to be in all shoot-em-up fans games collections.

THE VERDICT.
Well worth asking Santa to leave a copy of Galaxians in your stocking this Christmas.
- **Action** ⊥⊥⊥⊥
- **Graphics** ⊥⊥⊥
- **Addiction** ⊥⊥⊥⊥
- **Theme** ⊥⊥⊥

PLAY WITH TERRAHAWKS

Terrahawks is the name of the game — and the name of a new TV series featuring the puppets of Gerry Anderson, the man who brought you Thunderbirds.

Philips have signed a deal with Mr Anderson to market games based on the series — and Terrahawks is the first of these cartridges for their G7000 system.

At the launch of the new game Philips owned up that it was being written before someone came up with the idea of linking it to the TV show.

But the game has all the ingredients of the show — nasty evil aliens and a brave defence force determined to beat off their attacks.

Terrahawks is the first of a new wave of games for the G7000 which are a considerable improvement on what has come before. It's a classic space shoot out — in Galaxians or Space Zombies style.

The game starts with Zelda — chief nasty in the TV show — appearing on the screen and launching a wave of ships to attack the Hawknest, the Terrahawks' base. You control one of the Terrahawk ships and blast away at the alien ships which swoop and swarm above you.

As the game progresses each wave of alien ships is armed with more devastating and dangerous weapons to hurl down at the defenders. It begins with clusters of rockets which are fairly easy to blast or avoid. Then come the anti-matter mines which drift down slowly — but have the nasty habit of homing in on your Terrahawk ship.

Then little green meanies appear to plague you. These are the Annihilators which race across the bottom of the screen at you if they manage to reach the earth's surface that is. Your best bet is to blast them before they land!

Meanwhile the anti-matter mines and rocket clusters are still falling too!

Zelda's fourth squadron is armed with the deadly Nucleonic Space Mines which zero in on their target.

By this time things are getting a bit hectic — and if you live through four screens Zelda begins her invasion again — but the aliens begin to get fiercer with each wave.

It's not the most original of games but quite addictive once you get into the swing of things. One small criticism I'd make is that it's difficult to tell when one game ends and another starts.

You only get one life so when your base is blasted by an alien that's it. But the only indication that the game is over comes when the score register flips back to zero at the bottom of the screen.

There is a high score register too — which makes playing against a friend a competitive affair.

Overall Terrahawks is a good addition to the range of games for the G7000.

THE VERDICT.
A basic space shoot out — but none the worse for that.
- **Action** ⊥⊥⊥
- **Graphics** ⊥⊥⊥
- **Addiction** ⊥⊥⊥
- **Theme** ⊥⊥

FURY OUT IN SPACE

Space Fury is a very old idea in a new and not altogether successful package.

Shoot-em-up fans will instantly recognise the similarity between Coleco's Space Fury and the legendary Asteriods game, even though there isn't an asteriod in sight.

You control the ship by moving left, right and forward as in Asteriods but the moving objects are certainly different, some would say uninteresting.

The game starts with a picture of an alien daring you to do battle with him. Coleco have made a very unconvincing attempt to synchronize the alien's lips with the scrolling message at the bottom of the screen.

This ridiculous performance is repeated at the beginning of each and every game. I have to admit the display is novel the first time round but from then on its attraction fades rapidly.

Compared with other games for the ColecoVision Space Fury's graphics are abysmal. The first screen start with 15 moving squares which you simply have to shoot. As the level progresses the squares join together to form large diamonds, which sounds sinister but actually makes the game easier to play.

The next stage of the game involves docking your ship with one of three mother ships on the screen. You have a limited time to manoeuvre your craft in position, if you fail to dock in the time limit you will lose any bonus you might have gained from the first level.

The other two sheets on the first level are similar to the first but the enemy are a different shape.

The graphics are so bad it's hard to tell what they're supposed to be, but one set of aliens does bear a resemblance to purple coloured doughnuts.

After the first level has been completed further sheets contain mixtures of aliens.

When a game finishes the alien appears again and cast his opinion upon your performance. His comments range from an "amusing" to a formidable opponent. To give you some idea how difficult the game is I became a "formidable opponent" within quarter of an hour.

Space Fury contains the obligatory catchy tune, but unusually bad graphics for the ColecoVision. It also has the one fault that marrs almost all the Coleco games, it's far too easy and fails to present a new challenge to the games player.

Space Fury isn't up to the usual standard of games available for ColecoVision, and when compared to the original Asteroids game it really does fall flat on its face.

THE VERDICT.
Give me an old fashioned Asteroids game any day of the week.
- **Action** ⊥⊥
- **Graphics** ⊥⊥
- **Addiction** ⊥⊥⊥
- **Theme** ⊥⊥



HYPERBLAST 32K by John Brierley
Simply the best arcade-action game ever written in 32K! Defend your Atari against 10 waves of the most awesome creatures ever to inhabit your TV screen!



CAVERUNNER 32K by Martin Cawley
It's a leap and a bound through dangerous waterfalls, across exploding volcanoes, braving sticks and stones after the prizes of a lifetime!



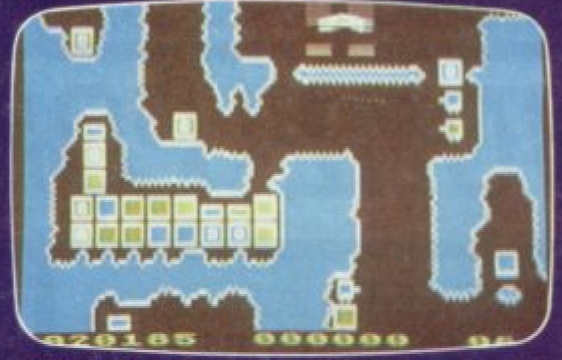
AIRSTRIKE 2 16K by Steve Riding
The new version with incredible graphics and joystick bomb control! English Software's best scrolling game ever!
AIRSTRIKE 1 16K AVAILABLE AT ONLY £6.95!!



JET BOOT JACK 32K by Jon Williams
Our space-age jogger takes you on a Ten Screen chase through the vinyl vaults of the PRESSING PLANT! Bugs and gremlins make it the experience of the age!



NEPTUNE'S DAUGHTERS by Mark Taylor and Ralph Frumin
Our 1st multi-screen game for the COMMODORE 64 ONLY – rescue the beautiful daughters from the clutches of the evil serpent!



FIREFLEET 32K by Manuel D. Caballero
Pilot your space cruiser through the corridors of the unknown – avoiding cannon, forcefields and nasty little tanks! BEAUTIFUL vertical scrolling graphics!

ATARI COMPUTER OWNERS...
TAKE THE ULTIMATE SCREEN TEST

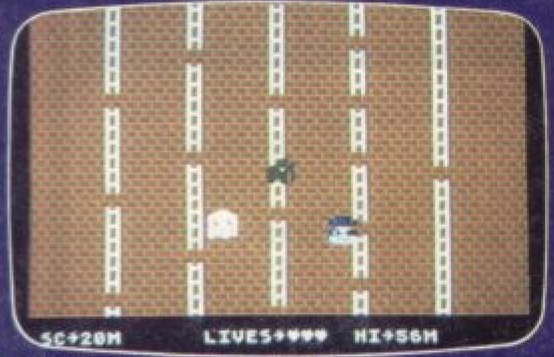
Games to excite you. Games to stretch your skills to the limit, and beyond. English Software programs will always put you to the ultimate test.
But first, put us to the test. See the quality of all our screens for yourself at your English Software dealer, including leading Spectrum shops – or order any program direct from us.
You'll find that we'll pass your screen test not just once, but every time!



BATTY BUILDERS 16K by Manuel D. Caballero
One of the best non-violent game programs ever written! Can you rebuild the walls before the falling blocks and TNT stop you?



CAPTAIN STICKY'S GOLD 16K by Steve Riding
Steve's latest game sends you to the bottom of the ocean in search of lost gold, with only your harpoon to help you!



STEEPLE JACK 16K by Peter Hawkins
Climbing higher and higher up moving ladders, STEEPLE JACK encounters flying ghosts and falling elephants in his quest to reach the top! Is it real or just a dream?



DIAMONDS 16K by Simon Hunt
Join the hunt for the Great White Diamond through 16 levels to win a real diamond – full details of the Diamonds Competition with every copy!

ENGLISH SOFTWARE™

THE POWER OF EXCITEMENT
The English Software Company,
Box 43, Manchester M60 3AD.
TELEPHONE 061-835 1358

ENGLISH SOFTWARE is available from selected branches of:
Boots
LASKYS
JOHN MENZIES
GREENS
and all good software dealers.



TAROT CARD 16K by Tony Austin. PRICE £12.95
Supplied complete with detailed book, TAROT CARD looks into the secrets of the classic fortune telling pack of cards. Full graphic display.

JUST OUT! JUST OUT! JUST OUT!
BOMBASTIC! 16K for Atari £9.95

ALL CASSETTE & DISK GAMES ONLY £9.95 POST-FREE

TRADE DISTRIBUTION: CALISTO, CENTRE SOFT, SOFTSEL C.P. LIGHTNING, SOFTSHOP, P.C.S., TIGER.

NEW FOR THE COMMODORE 64
SUPERFONT 4.0 Cassette Our new character generator lets you re-define and shape your own character sets. Full editing facilities and documentation. £6.95
SPRITE MAKER 64 Cassette Design and save beautiful multicoloured sprites, and use them in your own programs! Full editing facilities and documentation. £6.95

PROGRAMMERS: CAN YOU PASS OUR SCREEN TEST?
We're always on the lookout for new programmers. If you can work to the English Software standard of quality, we'll reward you by marketing your programs across Europe and the USA! Contact us today.

All English Software programs are sold according to the English Software Terms of Trading, copies of which are available on request.

THE GAMES PLAYERS' GUIDE TO THE MICRO

Our motto at *Computer & Video Games* has always been to advise our readers and save them money by pointing them in the direction of quality and value for money. This Christmas, we present 11 full machine reviews for you to scrutinise, offering advice and more importantly, helping to put your inquisitive minds at rest and make the right decision.

Our reviews, compiled by Richard Frankel, cover the popular machines as well as some of the latest contenders to the home market, which we feel will be successful in the near future. We make an assessment on the famous Atari 400 and 800 as well as revealing Atari's new baby the 600XL. In addition we look at the VIC-20 and CBM-64, the Acorn Electron and BBC, Japan's latest contribution, the Sord M5, and the increasingly popular Oric-1.



After blasting try exploding



What do home computers mean to you?

Do they conjure up images of '1984' and 'Brave New World'?

Or do you think of them as advanced video games?

The subject is shrouded in myth. One or two of which we hope to clear up (with a little help from the Dragon 32).

Video games are a great introduction to the world of the home computer.

But there's more to them than simply saving the universe.

"THEY'RE JUST A TOY FOR KIDS."

True they can be used as a toy. To prove it we've produced a wide range of high quality software aimed at the games player.

But to use a Dragon simply to play games on is rather like buying a car just to listen to the radio.

So what else is there? Well, there's programming.

We've even produced some software that'll help you master the basics.

Then there's Typing Tutor, a program that's particularly useful on the Dragon 32 thanks to its professional quality keyboard.

In fact our software range has something for just about everyone, from our Young Learning series right through to Computavoice, a program that can actually make your Dragon speak.

Take a look at the sample list provided and you'll see just what we mean:

Dragon Selection
Personal Finance
Dreambug
Chess • Dream

YOUNG LEARNING SERIES.
Number Puzzler
Number Gulper • School Maze
Circus Adventure • Hide & Seek

ARCADE GAMES.
Berserk • Doodle Bug
Cosmic Invaders
Shark Treasure • Flag
Whirlybird Run

ADVENTURE GAMES.
Mansion of Doom
Shuttlezap • Eno/Stalag
Quest • Dragon Mountain

Just a selection from our range.

"THERE'S NO POINT BUYING ONE NOW."

Computers, like anything else, can seem a little daunting if you don't start right at the beginning.

But, basically, they are logical and easy to understand.

Especially if you start with a home computer that is logical and easy to understand.

Like the Dragon 32.

THE BBC MICRO

HARDWARE
PROCESSOR BASED: 6502
RAM: 32K (non expandable)
ROM: 32K
POWER SUPPLY: internal
R.F. OUT: phono socket
GAME PORTS
A-D CONVERTOR: 25 pin connector
VIDEO OUT: 5 pin din/phono socket
OTHER CONNECTORS: Tube, 1 MHz Bus (for connection to teletext adaptor), Printer, Disc Drive, I/O user port, Econet socket, 5 pin cassette input
KEYBOARD: 'Qwerty-style', 74 full travel keys, including 10 function keys
SOUND OUTPUT: on board speaker

SOFTWARE
SOUND: four individual channels, 15 amplitude levels, 255 pitch variations, 255 duration lengths. 14 part envelope generator.
BASIC: Acorn Structured Basic
USER DEFINED GRAPHICS: maximum of 30, 8 × 8 block grids
COLOURS: 8 NORMAL: black, red, green, yellow, blue, magenta, cyan, white
8 FLASHING: black-white, red-cyan, green-magenta, yellow-blue, blue-yellow, magenta-green, cyan-red, white-black.
GRAPHICAL SYMBOLS: none

PRICES AND OTHER OPTIONAL EXTRAS
BBC MICROCOMPUTER 'B': £349 (+VAT)
SINGLE 5.25" DISC DRIVE: £230 (+VAT)
DOUBLE 5.25" DISC DRIVES: £799 (+VAT)
TELETEXT RECEIVER: £195 (+VAT)
PRESTEL RECEIVER: £90 (+VAT)
12" B/W MONITOR: £90 (+VAT)
14" COLOUR MONITOR: £250 (+VAT)
ACORN DATA CASSETTE RECORDER: £26 (+VAT)
GAMES PADDLES (PER PAIR): £11.5 (+VAT)
SPARK JET PRINTER (MAX 132 COL.): £365
VOICE SYNTHESISER: £55 (inc. VAT & fitting)
SECOND PROCESSOR 6502: £170
* Prices correct at time of going to press.



The BBC computer was the machine everyone waited for. And they weren't disappointed! The BBC offers powerful graphics, sound and basic as well as having a good quality keyboard and well documented manual. The machine came in two versions — Model A and Model B. The Model A came in at £300 and the B at £400. The Model A is no longer available so this review deals with the 'B'. The machine now comes with 32k RAM and 32k ROM as standard.

BASIC/GRAPHICS/SOUND

The BBC uses "structured" Basic which is becoming more common on new machines and is considered a more logical approach to programming. For those not familiar with structured Basic. Structured programming eliminates statements like "Goto" and "Gosub". Instead subroutines are named when they are created and can then be called by name as opposed to line number.

Other Structures include IF . . . THEN . . . ELSE, ON . . . GOTO(SUB) While . . . Do loop. LISTO will give you a listing where all structured loops are indented for easy identification and neat format. Procedures and functions may be defined using local and neat format. Procedures and functions may be defined local variables, and any reference to a local variable outside its procedure or function results in a "NO SUCH VARIABLE" message. Procedures are defined outside the main program and may be called from inside the main body of the program.

The 6502 based BBC executes Basic programs extremely quickly.

Machine code routines may be executed using either USR or CALL. This will be particularly useful for programs where areas of coding need to be executed at "Basic" speed like text instructions.

Most reserved words may be abreviated i.e. L. for List or P. for Print. This system works for statements as well as direct command entries. Upper and Lower case characters have different values in variables therefore lower case characters can not be used as reserved words.

The text display works in conjunction with the eight graphics modes. The maximum text display is in Mode 0 which will give you 80 × 32 characters, and the minimum — Mode 2 or 5 — which has a 20 × 32 display.

The BBC's graphical capabilities are far superior to any other machine in its price range. There are eight different modes with a maximum resolution of 640 by 256! The co-ordinate 0,0 is in the bottom left hand corner of the screen in all modes. Changing the graphics mode when graphics have been created on a given mode results in the machine replotting the points to fit the new mode. In other words a program that uses graphics will run in any mode and the coarseness of the plotting will adjust accordingly.

Plot v,x,y where v varies from 1 to 88 and x and y are the screen co-ordinates has 88 different options. This may be used for drawing lines, plotting points or even filling in defined areas such as rectangles, triangles or any irregular shape or area.

It is possible to mix the graphics and text windows and set them anywhere on the screen e.g. you could have a graphics window in the centre of the screen surrounded by text.

There are 16 colours available and the ability to change the drawing colour, background and text foreground. Of course, you are restricted to the number of colours allowed on the screen at any one time, depending on the mode in operation. In the text modes it is possible to colour each individual letter as desired.

Generally speaking the higher the resolution the less amount of colours allowed on the screen at any one time.

The BBC's sound generator is phenomenally good. There are four individual channels, 15 amplitude levels, 255 pitch variations and 255 variable durations. If that's not enough to contend with there is a 14 part envelope generator. It is possible to synchronise all four channels to form a chord by marking the appropriate note with the number of channels to play at once. The sound generator techniques may be confusing at first, but once mastered becomes a powerful tool.

KEYBOARD AND CURSOR CONTROL

The keyboard is good quality although slight "play" is apparent on all keys. It is housed in a plastic injection moulded case which is a little on the weak side. While on the subject of the case, it may also be of interest to know that it is not supported at all being impractical to house the monitor or disc drives on the top.

There are 74 keys each with a variable auto repeat feature. Located along the top of the keyboard are ten function keys. These may be used for anything from a simple function to a complex string of commands. They are easy to program too.

For example if you wanted to put "Print Sqr(A)" into function key number two, the

procedure would be as simple as *Key 2 "Print Sqr(A)".

There are three L.E.D.s which light when Caps Lock, Shift Lock and Cassette Motor are in operation.

Editing is unusual. The procedure is to list the appropriate line, use the cursor direction keys to reach the first character and then press the Copy key to produce a direct copy of the line, stopping when an insertion is needed or skipping a character if it is to be deleted.

PERIPHERALS AVAILABLE

Although Acorn supply a cassette recorder for about £26, you may use one of your choice as input is via a seven pin din socket, which can be computer controlled if you have a remote socket.

To load a program you must type "LOAD" or "CHAIN" followed by the file name. You may use "" as the file name to load the next program on the tape. Ease of data transfer is disappointing as one has to judge when the data sound is just right i.e. not too loud or soft and at exactly the right tone. Otherwise when levels are correctly adjusted, data transfer is a reliable source.

Single or double 5.25in disc drives are available from Acorn and retail for around £230 for single and £799 for double sided.

Other extra options available include a teletext receiver, Micronet 800 adaptor, a colour or black & white monitor, dot matrix printer, voice synthesis and even a second 6502 processor — which gives you the ability to "down load" seoftware over the telephone lines and gives you access to Prestel's 250,000 pages. One area that some enterprising manufacturer could look at is a joystick. There are none on the market that really work effectively — but we do have some top secret information that Vulcan Electronics are planning to release a good quality stick soon.

CONCLUSION

The BBC is an extremely versatile and adaptable machine, competitively priced when you take into account all it has to offer. Many high quality, low cost, games exist for the BBC, and you'll find lots of games listings in magazines like C&VG. It's also an ideal machine to start learning on — and it expands with you as you learn. It's advanced enough to cope with the experienced programmer. If you can afford one — go for it!

ACORN ELECTRON

HARDWARE
PROCESSOR BASED: 6502 A
RAM: 32K (non expandable)
ROM: 32K
POWER SUPPLY: external
R.F. OUT: phono socket
GAME PORTS
A-D CONVERTOR: 25 pin connector
VIDEO OUT (R.G.B.): 5 pin din
COMPOSITE VIDEO OUT: B.N.C.
OTHER CONNECTORS: Edge board expansion connector
KEYBOARD: 'Qwerty' style, 56 full travel keys
SOUND OUTPUT: on board speaker

SOFTWARE
SOUND: four individual channels, 15 amplitude levels, 255 pitch variations, 255 duration lenghts, 14 part envelope generator
BASIC: Acorn Structured Basic
USER DEFINED GRAPHICS: maximum of 30 8 × 8 block grids.
COLOURS: 8 NORMAL: black, red, green, yellow, blue, magenta, cyan, white
8 FLASHING: black-white, red-cyan, green-magenta, yellow-blue, blue-yellow, magenta-green, cyan-red, white-black.
GRAPHICAL SYMBOLS: none

PRICES AND OTHER OPTIONAL EXTRAS
ACORN ELECTRON:
£199 (inc. VAT)
12" B/W MONITOR:
£90 (inc. VAT)
14" COLOUR MONITOR:
£250 (inc. VAT)
ACORN DATA CASSETTE RECORDER: £26 (inc. VAT)
GAMES PADDLES (PER PAIR):
£11.5 (inc. VAT)

OTHER AVAILABLE LANGUAGES
(D=disc, C=cassette)
FORTH: £15 (C) +VAT/£18 (D) +VAT
LISP: £15 (C) +VAT/£18 (D) +VAT

MAIN SUPPLIER
BBC Microcomputer Systems
C/O Vector Marketing
Dennington Estate
Wellingborough
Northamptonshire NN8 2RL



The Electron may appear to some as a revamped model A. Retailing for under £200 and aimed at the Spectrum/Dragon market. Although it is in their price range, it offers superior capabilities.

Many of the BBC's features have been included on one chip on the Electron. Apart from this, there are other features which differentiate the two which we shall examine.

BASIC/GRAPHICS/SOUND

The Basic used by the Electron is almost identical to that on the BBC machine. It is slightly slower than the BBC, but still one of the fastest for its price.

A vast majority of BBC programs run on the Electron requiring little or no detail changes.

The Basic used is "Structured" which still excludes the Structured loop WHILE . . . DO.

Upper and lower case characters are available and hold different values. They are distinguishable in variable names so variables may use reserved words as long as they are in lower case e.g. 10 print=1435456. Integer variables have absolute accuracy with a maximum size of 2,147,483,647. Like the BBC, string variables may be a maximum of 255 characters long.

The EVAL statement allows the user to input a numerical function e.g. 10*5/sqr(56), which will be EVALuated by the computer for use within the program if necessary.

Built into the system is an elapsed-time clock which has an assigned variable called TIME. It may be cleared or preset to any value and it is incremented every 1/100 of a second.

This feature is particularly useful for games playing where it may be necessary to time the player for input or reaction. Variables may be defined as 'local' within a procedure or function. Procedures may be defined from outside the program and can easily be called to from inside the main body of the program.

For direct memory manipulation, peek and poke are not used. Instead three operators are introduced. The symbols used are as follows: ?, ! and $. These are used to poke a value into a location or return the existing

value (PEEK) operate peek and poke on four consecutive locations and place a string into memory respectively.

A full set of self explanatory error messages are used, requiring no referencing.

The Electron has ten programmable function keys. These could be used to good effect for commands like "LIST" or "RUN" a complex string of procedures.

For assembly enthusiasts, the Electron allows you to include assembly instructions within the bounds of a basic program for routines that require speed.

The hi-resolution graphics on the Electron are identical to that on the BBC except Mode 7 which, disappointingly, is not present. I say disappointingly as it only uses 1k of memory as opposed to the other modes memory usage of 8k to 20k! Other modes are intact giving you a range from 165 × 256 resolution up to an astonishing 640 × 256 resolution, and a text display ranging from a large charactered 20 × 32 display up to a generous 80 × 32 display — ideal for word processing!

While on the subject of resolution, the Electron — and BBC — have a marvelous unique resolution plotting system. 0,0 is in the left bottom corner with a theoretically 1280 points across and 1024 points upwards, regardless of what mode you are in.

When I say points don't mistake it for resolution, as a DRAW 1279, 1023 in Mode 2 will result in a diagonal line much thicker than the ultra fine diagonal line you will get with DRAW 1279, 1023 in Mode 0.

This system means that graphics created in any of the graphics modes, will also work in any of the other four graphical modes, re-adjusting the design to the available resolution! Now if that seems a little heavy, relax.

All other BBC graphical commands are available like DRAW, PLOT and MOVE, although the ability to scroll graphics sideways is only available through machine code. VDU can be used to redirect text and graphics windows, shade in assigned shapes, redefine characters and much more.

There are 16 colours available — eight normal and eight flashing. These can be used to good effect for drawing colour, background, background and text foreground. The amount of colours available within the various modes, generally decreases as the resolution increases. Text characters may be individually coloured if so desired.

The otherwise sophisticated sound on the Electron is spoilt by the inability to play two or more voices together. There is a 14 parameter part envelope generator.

KEYBOARD AND CURSOR CONTROL

The "QWERTY" style keyboard is really excellent — even better than the BBC's — and in my opinion is the best under £400! There is no 'play' which spoilt the otherwise good quality BBC keyboard and it is very quiet too. There are 56 auto repeat keys altogether — 17 less than the BBC's — of which most have around three functions. On most keys are 'one entry' keywords — like the Spectrum — which are optional — unlike the Spectrum!

These are accessed via the function key. The ten function keys — found separate from the keyboard on the BBC — are combined with the numerical keys 0 to 9. A few other keys found separate on the BBC are combined with other keys on the Electron — which explains its slightly smaller keyboard. Shift lock is missing. The case is beautifully designed and attributes to ones overall good impressions.

Cursor control and editing is also like the BBC. To edit a line, one must move the cursor up to the line with the direction keys, then press the copy key to reproducing a copy of that line at the block cursor — located underneath — stopping for insertions, or skipping unwanted characters. This is not one of my favourite features!

PERIPHERALS

There are sockets for domestic TV, R.G.B. monitor and composite video output. The R.F. output is clear and stable, but if you must have a colour monitor, they retail for around £230. There is no command for picture centring as on the BBC. On my standard colour television the top of the display was lost.

The Electron hasn't got all the output sockets that the Beeb has got so Acorn are planning an expansion box, to which hopefully disc drives, printer and Prestel could be connected. As yet I have no details of whether existing BBC peripherals will be compatible.

It also looks sceptical whether the more serious BBC expansions like extra processor — requiring 'tube' connector.

CONCLUSION

The Electron is an ideal machine for those of you who fancy owning a BBC B — but just can't afford one! It doesn't have the expansion potential of the BBC, but it's certainly a winner in terms of design, power, quality and competitive pricing. Although the Electron is in the lower price bracket it is unfair to compare its abilities to the Spectrum or Atari range. It's simply a superior machine — powerful enough to satisfy the most demanding gamer who wants his micro to do other things as well.

COMMO

HARDWARE
PROCESSOR BASED: 6502
RAM: 5K (expandable to 32K,
ROM: 20K
POWER SUPPLY: external
R.F. OUT: five din socket to external R.F. modulator
GAME PORTS: nine pin Atari compatible
VIDEO OUT: five pin din
SERIAL PORT: six pin din
USER I/O: 24 contact, printed circuit connector
MEMORY EXPANSION: 44 contact, printed circuit connector
CASSETTE OUT: 12 contact, printed circuit connector
KEYBOARD: Qwerty style, 65 key, full travel
SOUND OUTPUT: television speaker

SOFTWARE
TEXT DISPLAY: 23 × 22 characters
HI-RESOLUTION: 184 × 176
SOUND: four channels (voices) three octaves, 15 volume control settings
BASIC: Commodore 'New Rom' Basic
USER DEFINED GRAPHICS: yes
COLOURS: black, white, red, cyan, purple, green, blue, yellow, orange, light orange, pink, light cyan, light purple, light green, light blue, light yellow.
GRAPHICAL SYMBOLS: 68
*PRICES AND OTHER OPTIONAL EXTRAS
VIC-20 COMPUTER WITH



DORE VIC-20

CASSETTE RECORDER, COMPILATION TAPE AND INTRODUCTION TO BASIC PART 1.: £150 (inc. VAT)
1541 SINGLE DISC DRIVE: £229 (inc. VAT)
DOT MATRIX PRINTER (30 C.P.S.): £229 (inc. VAT)
DOT MATRIX PRINTER (60 C.P.S.): £346 (inc. VAT)
COLOUR PRINTER PLOTTER: £170 (inc. VAT)
COLOUR MONITOR: £230 (inc. VAT)
16K MEMORY EXPANSION: £39 (inc. VAT)
8K MEMORY EXPANSION: £29 (inc. VAT)
3K MEMORY EXPANSION: £19 (inc. VAT)
SUPER EXPANDER: £35 (inc. VAT)
PADDLES: £14 (inc. VAT)
JOYSTICK: £8 (inc. VAT)
VIC WRITER WORD PROCESSOR: £25 (disc), £20 (cassette)
*prices correct at time of going to press.

OTHER AVAILABLE LANGUAGES
(C=cartridge, S=soft)
FORTH: £39 (D), £20 (C)



When Commodore announced the arrival of their Vic-20 computer in August 1981, it was considered a very good value for money package, at under £200 it incorporated hi-resolution colour graphics, a full travel keyboard and a sophisticated sound generator. The Basic that it uses is the standard Commodore Basic.

At the time its closest rivals were the Tandy Colour Computer and the Atari 400.

For those potential buyers who are comparing the Commodore-64 with the Vic-20, it must be noted that the 64 has not only great potential as a games machine but as a business machine, whereas the Vic-20 is really aimed directly at the home user market.

The Vic initially contains only 3.5k of user RAM! However, an eight or 16k expander cartridge is available.

The Vic-20 is one of the most readily available computers around, being obtainable at most hi-fi and computer shops across the nation. Its closest rival today is the Spectrum which has also been reviewed elsewhere in this supplement. For around £140 or less, today's Vic-20 buyers will get the main console, a cassette deck (previously retailing for around £44), a compilation game cassette and a written introduction to Basic.

BASIC/GRAPHICS/SOUND

The Basic used in the Vic-20 is Commodore's Basic Version 2.0. Unfortunately it is not very fast so it makes it impractical for high speed graphical animation. All of the usual features of Microsoft Basic are present. There is a full set of error messages which are self explanatory, eg "bad subscript error" or "formula too complex error", unlike other machines' coded error messages which require tiresome referencing.

All Basic keywords can be entered in a shortened form. These are mostly two or three characters long. For example the abbreviation for READ is represented by R 'SHIFT' E.

The text character display is disappointingly small, only 22 × 23 characters. On the good side lower and upper case letters are available by touching the Commodore logo key with either business or full graphical symbols.

The Vic was named after its Video Interface Chip which plays an important role within the computer. It is primarily used to handle sound routines, graphics joystick and light-pen control. This can be manipulated by the user to alter its operations to suit the intended application.

Its internal registers control areas like where the location of the screen window occurs, the whereabouts of the character set or where the screen RAM may be found.

There are eight programmable functions, which can easily be programmed to activate anything from a short function to a string of commands accessible at the touch of a key.

Compared to the Spectrum the Vic's graphics are feeble giving only 184 × 176 resolution as opposed to the Spectrum's 256 × 192. It is possible though difficult to create user defined graphics on an 8 × 8 block grid, and to alter the character set pointer to point to characters that you have designed, which may then be accessed via the keyboard.

By adding the super expander plug-in cartridge you will have access to fairly powerful graphics features. These include CIRCLE — which gives you the ability to create variable sized circles and PAINT — which allows you to shade in specified areas or shapes.

It must be noted that having said hi-resolution graphics are available, unless you own the super expander cartridge you will find them incredibly difficult to use. For example, if you wanted to draw a line between say the points 0,0 to 100,80 you would have to poke each individual location in memory for each point on the screen making it a laborious job to create a simple picture.

Other simple graphical techniques are obtained by using the 64 piece graphics character set, colouring the blocks if necessary. This is implemented by pokeing the 22 × 23 text screen locations with the appropriate graphical character code.

There is a total of 16 colours. However, there are limitations. The border can only be one of eight colours, the background may use one of 16 colours and the hi-resolution allows you to use only two colours (foreground and background). If desired, text characters may be individually coloured.

The Vic's sound capabilities are advanced and flexible. It has four channels which include three voices (Alto, Tenor and Soprano) and also a white noise channel. The sound is output through the TV speaker, so the volume may be adjusted on the TV or from the computer's pre-amped 15 volume levels. There are just over three octaves altogether and voices may be synchronised to play simultaneously.

The white noise channel allows you to create almost any type of sound and may be used in conjunction with the other three voices if desired. The manual thoughtfully supplies you with 20 different sound settings that range from a wolf whistle to the rushing sound of ocean waves!

KEYBOARD AND CURSOR CONTROL

The keyboard on the Vic-20 is the same excellent one also found on the CBM-64. It is slightly curved to aid ease of typing. Down the right hand side of the keyboard are the four function keys each with two functions.

The keys are supported by a metal plate which stops the circuit board bending if a key is struck hard. Included are "shift lock" and "run/stop" keys. All graphics symbols and colours are accessible via the keyboard.

Also like the 64, and other Commodore machines, cursor control allows you to "insert" and "delete", move cursor up, down, left or right. One useful feature is that after editing a character or word in a program line, you may press "Return", there is no need to go to the end of the line. You may also move the courser to any character, change it and press Return. This is known as "Full Screen Editing".

PERIPHERALS AVAILABLE

A dedicated cassette recorder is supplied with the computer. It is the standard Commodore version with fixed volume and tone controls for trouble free loading. The cassette is a reliable data transfer source, and will load programs first time!

A disc drive is available from Commodore but few commercial programs have been produced on disc. It will set you back about £225.

The games port is compatible with Atari-type joysticks, and there's plenty of those on the market to choose from!

Other peripheral devices available from Commodore are three types of printer and a colour monitor. Neither Light Pen nor Graphics Tablet seem to have been planned by either Commodore or any electronics independents, and I doubt if any will.

CONCLUSION

This machine is ideal for children or beginners who want to learn the fundamentals of programming. The price has dropped to a very reasonable price — around £99 — with the cassette player and programming aids thrown in thanks to tough competition from the Spectrum. You may like to add the super-expander to your Vic for about £35 — without this it has very little to offer the more advanced games player/writer. The machine's graphic text and expansion limitations will discourage the serious games programmer. On the plus side there is still a lot of games software around for the now rather elderly Vic-20.

THE COMMODORE 64

HARDWARE
PROCESSOR BASED: 6502
RAM: 64 (non expandable)
ROM: 20K
POWER SUPPLY: External
R.F. OUT: Phono:channel 36
GAME PORTS: Two Atari compatible
KEYBOARD: 66 "Qwerty" style, full travel, four double programmable function keys
SOUND OUTPUT: television speaker or hi-fi system.
SOFTWARE
TEXT DISPLAY: 40 × 25 characters
HI-RESOLUTION: 320 × 200 lines (64000 pixels)
SOUND: Three voices, eight octaves, wave shape programmable using envelopes (ADSR)
BASIC: Commodore basic. Same version as VIC-20 and new ROM Pets.
USER DEFINED GRAPHICS: Up to eight sprites on a 21 by 24 block grid
GRAPHICAL SYMBOLS: 61 (on keyboard)
PRICES AND OTHER OPTIONAL EXTRAS (inc VAT)
COMMODORE 64: £199
DISC DRIVE (5.25"): £225
COLOUR MONITOR: £230
CASSETTE UNIT: £44
DOT MATRIX PRINTER 1525: £230
LIGHT PEN: £20
OTHER AVAILABLE LANGUAGES (C=cartridge, s=soft)
FORTH (C): £P.O.A.
Z80 CARD CP/M (S): £P.O.A.
PASCAL (C): £P.O.A.
LOGO (S): £P.O.A.
COMAL (C): £P.O.A.
PILOT (S): £P.O.A.
*prices correct at time of going to press



For those considering a Commodore Vic-20, it may be worth your while (if you can stretch your budget) to look at the Commodore-64.

The CBM-64 was initially a replacement for the Vic-20. It's far superior with powerful graphics, sound and memory.

The CBM-64 originally retailed at £350 but now, due to competition from Atari, the price has dropped to around £225, although it is possible to find one for below £200.

The machine contains a hefty 64k of RAM leaving about 32k to the user. This should be enough to accommodate the most sophisticated and lengthy of games. The machine has such a large memory as it was primarily built for business purposes but it obviously suits advanced games too! 20k of ROM is also included which is used for the powerful graphics, sound and Basic that the machine uses.

BASIC/GRAPHICS/SOUND

The CBM-64 uses the same Basic as the Vic-20 — and the new ROM Pets — although there are other hardware features which differentiate the two and disqualify compatability. The screen display is 40 characters by 25 (upper or lower case) as opposed to the Vic's 22 × 33 character display. This will cause problems if trying to run a Vic program on the CBM-64, as for example, references to locations in the revised Video Interface Circuit will differ. The hi-resolution graphics offer 320× 200 resolution with a choice of 16 colours for drawing, background, border and coloured text.

One particular graphical feature which is extremely useful is the ability to create and manipulate sprites. This is a feature that any serious games writer will need, whether writing in Basic or Assembly language.

You may draw an object say an alien on a 21 × 24 block grid. Each individual block may be a different colour if necessary. When the object is complete you can store the sprite in memory by a series of poke statements, and recall the sprite to any part of the screen, and move it around if necessary.

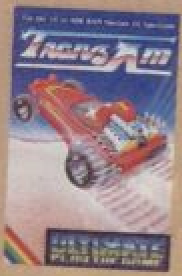
Up to eight sprites can be stored at any one time. The Video Interface Circuitry allows sprites to move over each other. One sprite may be given a higher priority so that the others may appear to pass behind it. A sprite collision indicator may be called from the program. This would be necessary in fast action games for missile hit or explosion target for example. Sprites may also be given high or low priority when passing in front of or behind text.

Sixty-one graphical symbols are also available which may be used in the 40 × 25 text character mode.

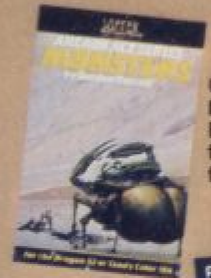
The CBM-64's sound capabilities are



Order Code: 15030
Chuckie Egg £6.95
By A&F, our favourite arcade game for the 48K Spectrum



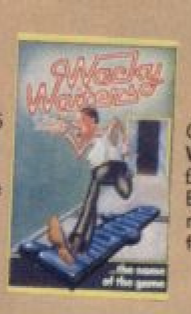
Order Code: 15012
Trans-am £5.95
By Ultimate, a high speed car chase for any Spectrum



Order Code: 45035
Monsters £7.95
By Softek, a laser firing arcade game for the Dragon 32



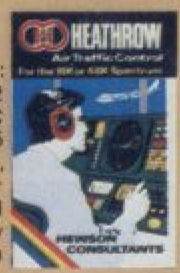
Order Code: 25067
Protector £7.95
By Quicksilva, hi-res arcade game for your BBC 'B' with joystick



Order Code: 35022
Wacky Waiters £5.50
By Imagine, a hi-res arcade game for any VIC 20



Order Code: 30029
Hustler £6.95
By Bubble Bus, a hi-res game of snooker or pool for the Commodore 64



Order Code: 15072
Heathrow ATC £5.95
By Hewson, an Air Traffic Control simulation for any Spectrum



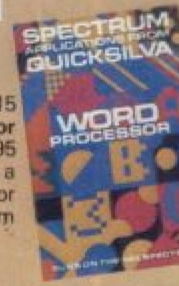
Order Code: 15024
Train Game £6.95
By Microsphere, an entertaining arcade game for any Spectrum



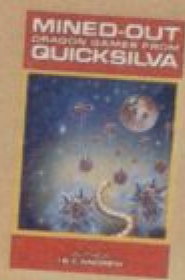
Order Code: 30053
Gridrunner 64 £7.95
By Llamasoft, our favourite arcade game for the Commodore 64



Order Code: 15011
Jet Pack £5.95
By Ultimate, a hi-res fast moving, arcade game for any Spectrum



Order Code: 15015
Word Processor £5.95
By Quicksilva, a Word Processor for any Spectrum



Order code: 45021
Mined-Out £5.95
By Quicksilva, a seven level arcade game for your Dragon 32

Choose any 3 for only 99p EACH (+ P&P*)

Home Computer Software

Here's the best offer you'll find for your home computer . . . Buy three tapes for only 99 pence each and save up to £23.88 on manufacturers recommended prices!!!

We offer the latest titles, some of which will be available from us before they are in the shops! Whatever your interest, you have our assurance that we'll have something for you. There is no obligation to buy more than six tapes from the hundreds available during your first years membership, all of which are offered at discounted prices. You will receive a copy of "Software Club Review" every month which will give unbiased evaluations on all our new software.



Order Code: 35008
Cosmaids £6.95
By Bug-Byte, a laser firing arcade game for any VIC 20



Order Code: 35049
Arcadia £5.50
By Imagine, a fast moving arcade game for any VIC-20: Highly recommended



Order Code: 20049
Dictator £5.95
By Bug-Byte, an adventure game for the 16K ZX81



Order Code: 40044
Hopper £5.95
By PSS, a version of the popular arcade game for the 48K Oric



Order Code: 40022
Painter £6.95
By A&F, a hi-res maze game for the 48K Oric



Order Code: 35066
Chess £7.95
Chess game for 16K VIC 20



Order Code: 25025
Dodg'em £5.95
By MS, a fast moving car chase for your BBC



Order Code: 25044
Graphics Pack £9.50
By Bug-Byte, a graphics utility pack to get the most from your BBC 'B'

OTHER TITLES AVAILABLE

Spectrum
15002 Monitor (Utility) £7.50 (16/48K)

ZX81
20004 Graphics Pack (Utility) £6.95 (16K)
20031 Croaka-Crawler (Arcade) £3.95 (16K)
20024 Asteroids (Arcade) £3.95 (16K)
20014 Pioneer Trail (Adventure) £3.95 (16K)

Dragon 32
45029 St George (Adventure) £6.95
45004 Personal Finance (Budgeting) £7.95

Oric 1
40015 Harrier Attack (Arcade) £6.95 (16/48K)
40029 Grail (Adventure) £6.95 (48K)
40061 Centipede (Arcade) £6.95 (48K)

BBC 'B'
25069 Space Pirates (Arcade) £5.50
25043 No. 6. Circus (Adventure) £9.99

VIC 20
35035 Frantic (Arcade) £5.95 (Any)
35027 Catcha-Snatcha (Arcade) £5.95 (Any)

Commodore 64
30045 Spriteman (Arcade) £7.95
30011 Panic 64 (Arcade) £6.95
30074 Star Trek (Adventure) £8.95

We give a no-quibble guarantee that should you have any problems with any software, it will be replaced by return of post.

All you have to do to take advantage of this fantastic offer is to select three tapes for your machine from those shown on this page and complete the coupon. Please don't send any money now — we want you to evaluate the software in the comfort of your own home before you decide.

We only offer genuine manufacturers tapes and would like to inform you that copying in any form is illegal.

To: The Software Club, Salisbury Square, Old Hatfield, Herts. AL9 5AD

Please accept my application and enrol me as a member of The Software Club and send me the introductory tapes whose numbers I have written in the boxes below, for which you shall charge me in due course, should I decide to keep the software (plus a total of £1.03 for postage & packing*). If I am not completely satisfied, however, I may return the tapes intact within ten days, my membership will be cancelled and I will owe nothing. As a member, I need not take a tape every month (or if I want no tape at all), I can say so on the form provided. I will, however, choose at least six tapes in the first year. All software is described in advance in the free monthly "Software Club Review" and is offered at a discounted price. I am over 18 years of age. (This application must be from your parent or guardian if you are under 18 years old.)

Mr/Mrs/Miss ____________________

Address ____________________

____

Postcode ____________

Machine ____________ Memory size ____________

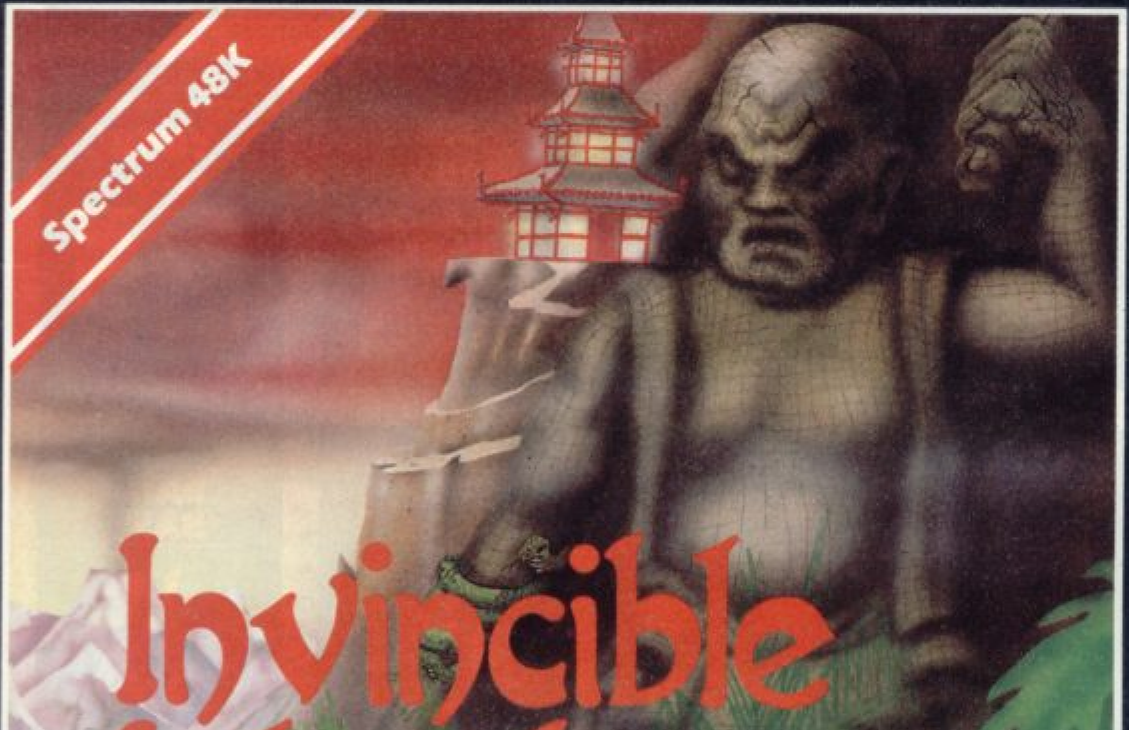
Order Code:

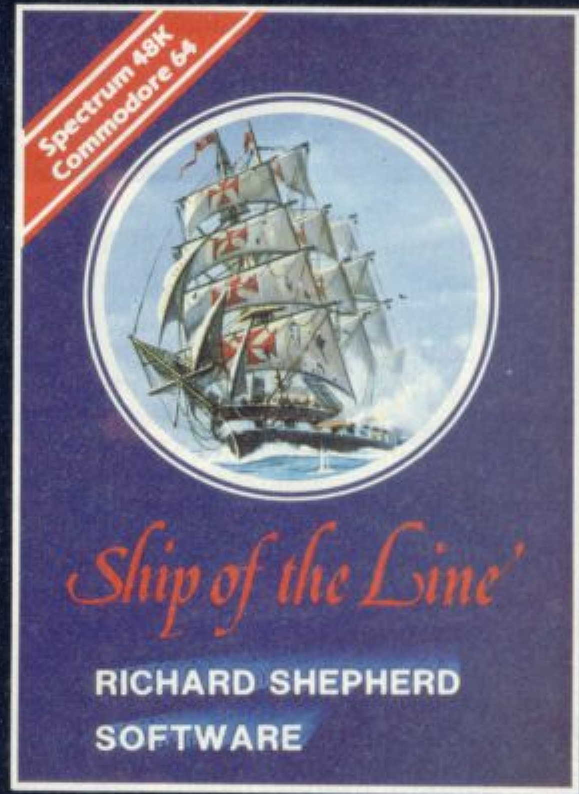
THE SOFTWARE CLUB

The Software Club, Salisbury Square, Old Hatfield, Herts. AL9 5AD

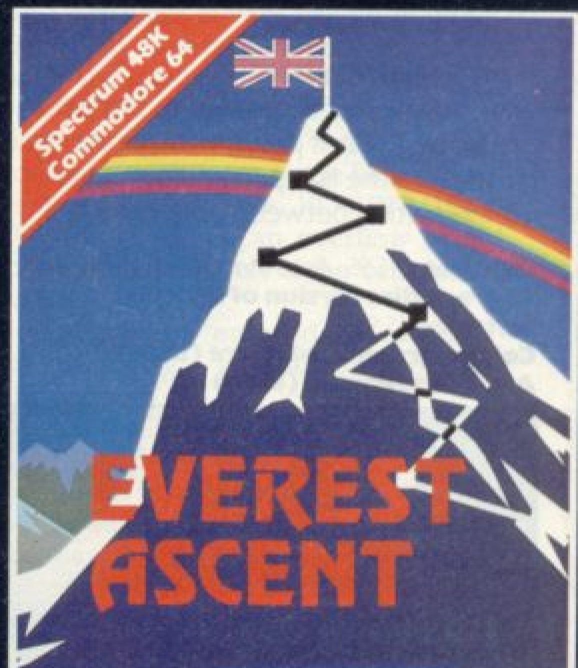
"ADVENTURES INTO IMAGINATION"

Selected titles available from
W. H. SMITH, BOOTS, MENZIES
AND ALL LEADING COMPUTER STORES





Ship of the Line
Command a sailing ship, juggle your supplies, crew and firepower. Fearlessly battle your way up the admiralty ladder, bribe Sea Lords as necessary until you make First Sea Lord! **£6.50**



Everest Ascent
Conquer the world's highest peak in defiance of all the obstacles, man and nature can throw at you. Survive avalanches, cross bottomless crevasses, cope with wayward Sherpas — but don't run out of supplies! **£6.50**

CREDIT CARD HOTLINE
06286 63531 (24 HOURS)

RICHARD SHEPHERD
SOFTWARE

ELM HOUSE, 23-25 ELMSHOTT LANE, CIPPENHAM, SLOUGH, BERKSHIRE.

MORE GOODIES FOR THE BBC MICROCOMPUTER FROM RH ELECTRONICS

The RH lightpen is compact, little bigger than a felt-tip. It is versatile, with a sophisticated microswitch at its point which responds to the slightest pressure, and an LED lamp at the user's end to indicate data transmission. Both microswitch and LED are fully programmable.

The RH lightpen is reliable, with a rugged metal case to provide physical and electronic protection. Its sensitivity can be adjusted to the thickness and type of your TV screen, giving the highest levels of accuracy.

With the lightpen connected to your BBC Micro you can draw lines on the screen, or give commands simply by pointing to a menu.

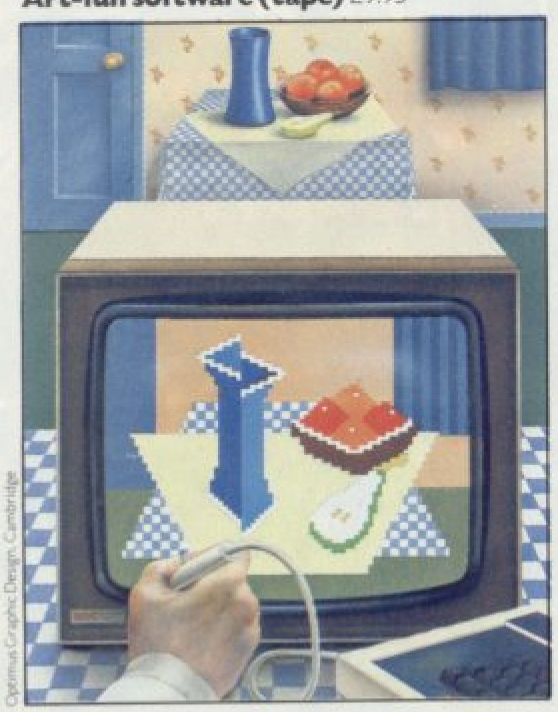
Colour-graphic software

This additional software is available so that all the colours of the BBC Micro's palette are available at the tip of your pen. Complex graphics can be created in minutes.

Art-fun software

This program is guaranteed to bring out the artist in you. It provides inspiration for users of the lightpen and provides full interaction between pen and screen.

Lightpen £45.95 *Approved by Acorn*
40 track disc version of lightpen software £5.95
Colour-graphic software (tape) £9.95
Art-fun software (tape) £9.95



Optimus Graphic Design, Cambridge



RH Electronics has a whole series of excellent software for the BBC Microcomputer Model B. For games, business and education, they will be highly valued by any BBC Micro owner.

Plegaron People Eaters £8.95
Stop the Plegarons' path of destruction by walling them in. A game of skill (nine levels) and cunning.

Galactic Wipeout £8.95
Fight off alien attackers and meteor showers as you transport the survivors of the human race to a new planet.

Ski Slalom £8.95
Guide the skier through the 40 gate course avoiding deadly ice and landsliding snowballs.

Viper £8.95
Guide the snake around its electric cage devouring as much food as you can. Avoid touching the electrified walls, swallowing unsavoury food or causing the snake to eat its own tail.

3 in 1 (A) £7.50
This set of three games for the younger enthusiast includes: Task Force – a strategic battle of sea and air; Demolish – blast your way to freedom avoiding radioactive fall-out and falling masonry as you go; Cosmos – where you have to defend the earth from an invading battle fleet.

Ed-master £12.95
This program uses the quiz format combining the element of fun with educational teaching. 160 questions may be programmed by the teacher, divided into eight subject areas of 20 questions each. Questions and answers can be changed as often as you wish. The computer will tell the pupil whether he or she has the correct answer or not, but cheating is prevented as pupils cannot access the program to find out the correct answers. The scores of up to 40 pupils are stored in the quiz memory and are easily recalled for comparison.

Snail Trail £4.95
Help the snail escape from the maze he's fallen into before he starves to death. There are two skill levels to this cassette.

Database £12.95
A disk for the business or home. It enables you to file, sort and access a great number of items such as diary entries, addresses, telephone numbers, accounts or other information.

Order form Please send me:

________________	£ ______
________________	£ ______
________________	£ ______
________________	£ ______
________________	£ ______
________________	£ ______
________________	£ ______
________________	£ ______
Total	£ ______

Make cheque or PO payable to
RH Electronics (Sales) Limited
allowing 28 days for delivery.
All prices include VAT and p&p.
Send or telephone your order to:

RH Electronics (Sales) Limited
Chesterton Mill, French's Road
Cambridge CB4 3NP

Telephone (0223) 311290

powerful, offering three voices in eight octaves. Envelopes (ADSR) may be developed allowing one to create the right sound effect for the purpose intended. This method determines the shape of the sound curve. Sound may be outputed through the television speaker or hi-fi system.

KEYBOARD AND CURSOR CONTROL

The "Qwerty" style keyboard is excellent, easy to use and is bounce free. It has 66 keys in all with four programmable keys incorporating eight functions — two per key. Graphics symbols —characters — and colour selection may be made from the keyboard via the control key. One useful feature is the shift lock key. The keyboard is housed in a strong moulded plastic casing.

Cursor control is the same as all other Commodore machines using three keys plus the shift key to allow the user to delete or insert text — which some otherwise good micros lack — move left, right, up or down.

PERIPHERALS AVAILABLE

If cassettes are to be used for data storage purposes, a Commodore cassete player will have to be purchased. This has a unique interface connector and is computer controlled having fixed volume and tone levels.

For the more serious user Commodore 5¼" disc drives are available. These are half the normal height and retail for around £225 which is comparatively cheap.

It is possible to connect the CBM-64 to Pet double drives — 8030 or 8050 — but in this ease an IEEE 488 interface and new operating system (DOS) will be necessary. The interface will set you back about £60.

There are plenty of good Atari compatible joysticks available from Commodore and other electronics independents. Joystick prices start at around £10 and go up to about £50 for a really good remote control one! A light pen may be obtained for around £20 and a Commodore printer may be plugged into the serial port socket located at the back.

CONCLUSION

The Commodore 64 will eventually supercede the Vic-20. It offers powerful graphics, sound and that big 64k memory. An increasing amount of software is becoming available for this new micro, and with the pre-Christmas drop in price it is well worth considering — if you can stretch your budget to around £285 which will include the Commodore cassette player.

THE SORD M5

HARDWARE
PROCESSOR BASED: Z80A 3.58 MHz
RAM: 20K-4K user RAM
ROM: 8K-expandable to 16K
POWER SUPPLY: external
R.F. OUT: phono socket
GAME PORTS: two × six pin mini din
VIDEO OUT: phono socket
SOUND OUT: phono socket
SERIAL PORT: built in centronics interface-16 pin
KEYBOARD: 55 key touch sensitive membrain
SOUND OUTPUT: television speaker
CASSETTE I/O: eight pin din socket
SOFTWARE
GRAPHICS AND TEXT MODES: text, 24 × 40 characters GI, 24 × 32 text and keyboard graphics characters multi-colour, "tessalated" 4 × 4 matrix graphics pattens GII, 256 × 192 resolution, up to 16 × 16 size graphical sprites plot, draw, circle, box, bar, paint-BASIC-G
COLOURS: transparent, black, green, light green, deep blue, light blue, deep red, cyan, red, light red, deep yellow, light yellow, deep green, purple, grey, white:- background, "backlight plane", sprite, character or pixel may be individually coloured. colour code from $0 to $f (hex)
SOUND: six octaves, 15 volumes, 255 tempos, 8 envelope shapes, three voice harmony, four channels including noise generator
BASIC-I: integer
BASIC-G: integer-advanced graphics
USER DEFINED GRAPHICS: up to 224 characters
GRAPHICAL SYMBOLS: 128 — including Greek italics.
SPRITE DEFINITION: max 32 individually controlled, 16 × 16 or 8 × 8 definition; 0 to 31 priority level
PRICE
SORD M5 COMPUTER: £190
OTHER AVAILABLE LANGUAGES
BASIC-G: £35-advanced graphics
BASIC-F: £35-floating point arithmetic
FAL-C: £35-applications package



What makes a good machine is a combination of quality and value for money. The Sord M5 (by CGL Home Computers) has broken into the sub £200 market retailing for around £190. For that price you get the basic machine, a rather large external power supply, television lead, Basic I cartridge — a very simple and limited integer Basic — and joypads!

There is 20k of RAM. A full 16k is taken up for video RAM, giving superb graphic capabilities. There are three types of Basic available, of which two we shall investigate. The processor used is the Z80A running at 3.58MHz with only 8k of ROM (expandable to 16k with the expansion cartridge).

BASIC/GRAPHICS/SOUND

The Basic-I cartridge is very limited in terms of functions and capabilities. For starters its calculations are integer only with a range of −32767 to 32767. If a decimal is used in a calculation, the result will be "syntax error"! Also, exceeding the integer range limit during the steps of a calculation, i.e. 10 PRINT (100 * 1000/1000) will give you an overflow error, even though the final result of the calculation is in range.

Keywords may be entered by one key press via the function key, although this is, thankfully, optional.

Both upper and lower case characters are available but hold the same values, so LIST and list would be acceptable, also LET A = B would be the same as LET A = b and so on.

Variable names may be up to a maximum of 16 characters long which is quite adequate. LET statements are optional as with the variable reference in NEXT.

When inputing lines, the computer will put a space between the line number and first character but will not separate Keywords. If you do not put a space after a Keyword, it will result in a syntax error. This procedure is extremely annoying and will prove frustrating especially to newcomers in the programming field.

Read and Data statements are also limited. Firstly data containing alphanumerics must be separated by commas and quote marks, ie.

DATA "a", "b", "c" etc. and you are not allowed to read straight into an array, e.g. . . .

```
10 FOR a = 1 to 10
20 READ s(a)
30 NEXT a
```

Arrays of any size have to be dimensioned. A new command normally found on more expensive machines is HEX$(). This is used to return the hexadecimal value of the string enclosed in the brackets. Error messages is another area which would not be helpful to the newcomer.

Basic-I is not equipped for complex graphics, but can produce simple graphics symbols. These are accessed via FUNCTION together with "3". By simply inserting special control codes in the PRINT statement it is possible to scroll the screen in four directions.

To use the M5 to its full, a Basic-G cartridge will have to be purchased. This will turn the M5 into a very powerful graphics machine which is ideal for games. It contains all the features mentioned in Basic-I and many more.

Built into the Basic are some impressive interrupt and timing features. For interruption of the keyboard and joystick, ON KEY GOSUB and ON JOY GOSUB are used. Error handling is controlled by ON ERROR GOSUB.

There are four screen modes to choose from. These are text mode, which gives a 24 × 40 display — 8 × 6 — character grid; GI, which gives a 24 × 32 text display plus all the graphics symbols; multi-colour mode which can't display text but 'tessellated' graphics patterns, from graphical symbols — 4 × 4 dot matrix size — corresponding to ASCII codes 32 to 255; and finally GII, the hi-resolution mode with full size sprites.

Up to 32 sprites can be displayed and moved individually. You have the option of creating a sprite on a 16 × 16 or eight by eight block grid. Similar to sprites on the Commodore 64, they are each given a priority level — from 0 to 31. The lower the level, the higher the priority, so a sprite of level five will 'eclipse' a sprite of level six and so on.

The statments used to manipulate the sprites are: LOC, location of the sprite on the screen; SCOD, to assign the sprite code; SCOL, to colour the sprite and ERASE, followed by the sprite code to erase it. DISC and DRCT are used to calculate the distance between sprites.

As well as sprite creation, there is a potential of 224 user definable characters. The high-resolution graphics give a 256 by 192 display. There are some other powerful statements too. PLOT is used to plot a single point; GMOVE to position the graphics cursor; DRAW to draw a line from graphics cursor to the given co-ordinates; BOX, used to draw a square or rectangle and BAR, the same as BOX but solid.

Two even more powerful statements are CIRCLE and PAINT, used to shade an enclosed area.

Initially there are two alternate screens — screen 0 and screen 1. It is possible to enter text into one while the other is being displayed, transfer text in one screen to the other — or vice versa — or rapidly switch between the two. View windows may also be set up. These are formatted VIEW X0,Y0,X1,Y1, where X0, Y0 are the upper left corner, and X1,Y1 are the lower right corner.

Sound generator techniques are also very sophisticated. There are six octaves with 15 variable volume settings, 255 variable tempos, four channels and eight preset envelope shapes!

KEYBOARD AND CURSOR CONTROL

The keyboard is the 'touch sensitive' type — similar to the Spectrum. It has a much more solid feel than the Spectrum, needing the minimum amount of pressure to activate a key. The keys are an odd shape, some square and some rectangular, with the bottom right hand corner chopped off! Most keys have three functions though others have an extra control function, e.g. mode GII.

The letters A to Z have FUNCTION accessible keywords. Each Key produces a click through the TV when pressed. This may be turned off if desired.

Editing is simple. There are four keys which when used in conjunction with the control key move the cursor up, down, left and right. Operating SHIFT + DEL will delete a character, and CONTROL + "P" is used for inserting text. Once an insertion or deletion has been performed, you may press RETURN, as the computer will input everything before and after the cursor on that line number.

PERIPHERALS AVAILABLE

You may use any cassette recorder of your choice. The cassette input is an eight pin din socket which supports a remote facility.

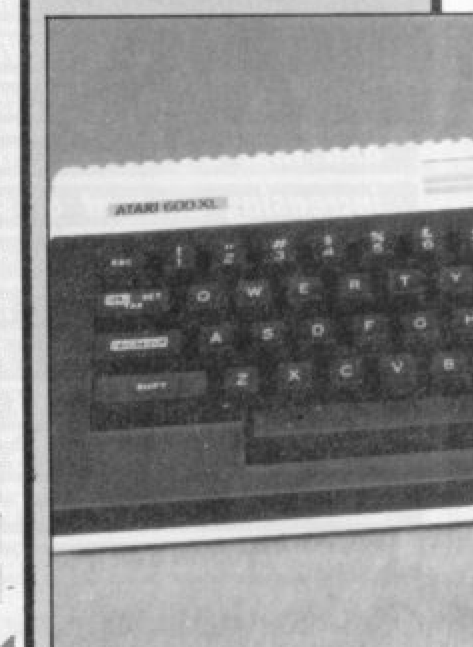
Apart from Basic-I and Basic-G, there are two other ROM cartridges. These are Basic-F — designed for floating point arithmetic — and FALC-applications package. No information or other languages like Pascal or Forth has been released yet, but there are plans for a 32k memory upgrade.

CONCLUSION

The Sord M5 is a quality machine with some powerful features. But, without the Basic-G cartridge it is nothing special. The cartridge will set you back about £35 — upping the price of the machine to £225. The vast amount of memory taken up for graphics means that most of the graphical implementation is already set up for you, and this makes the 4k user RAM look not so bad.

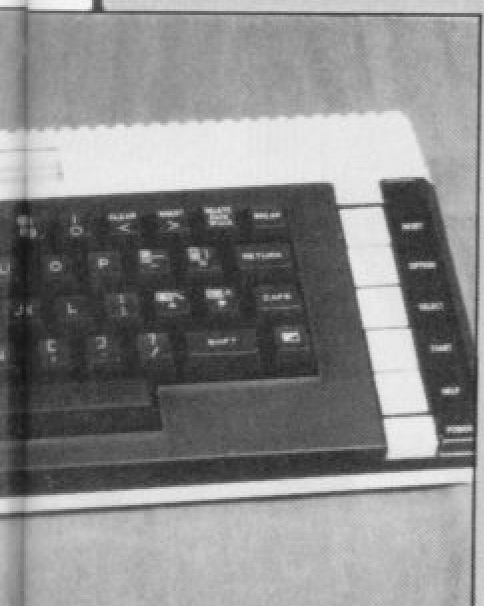
ATAR

HARDWARE
PROCESSOR BASED: 6502
RAM ATARI 600XL: 16K standard
RAM ATARI 800XL: 16K expandable
ROM: 10K
POWER SUPPLY: external
R.F. OUT: phono
GAME PORTS: 2
VIDEO OUT: 5 pin din
SERIALPORT: 13 pin
KEYBOARD: 55 'Qwerty' style full travel
SOUNDOUTPUT: television speaker
NEWCASSETTE 1010: 600bps, 100K bytes, 4 track, 2 channel, auto playback, volume, 3 digit tape counter, digital/audio
NEWDISCDRIVE 1050: built-in 6507 microprocessor, on board ROM, auto standby, capacity, dual density, single sided
SOFTWARE
GRAPHICS AND TEXT MODES: MODE 0: 40 × 24 text; MODE 1: 20 × 24 text; MODE 2: 20 × 12 text, five colours; MODE 3: 40 × 24 graphics, 4 colours; MODE 4: 80 × 48 graphics, 2 colours; MODE 5: 80 × 48 graphics, 4 colours; MODE 6: 160 × 96 graphics, 2 colours; MODE 7: 160 × 96 graphics, 4 colours; MODE 8: 320 × 192 graphics, 2 colours; MODE 9: 80: × 192 graphics, 1 colour; MODE 10: 80 × 192 graphics, 9 colours; MODE 11: 80 × 192 graphics, 16 colours; MODE 12: 40 × 24 graphics, 5 colours; MODE 13: 40 × 12 graphics, 5 colours; MODE 14: 160 × 192



600 XL

graphics, 2 colours; MODE 15: 160 × 192 graphics, 4 colours
COLOURS: grey, gold, orange, red-orange, pink, pink-purple, purple-blue, blue 1, blue 2, light blue, terquoise, green-blue-green, yellow-green, orange-green, light orange.: luminosity level between 0 to 15.
SOUND: four voices, 15 sound variations-distortion-,255 pitch :variations and 16 sound levels.
BASIC: Atari extended Microsoft Basic.
USER DEFINED GRAPHICS: yes 8 × 8 block grid
GRAPHICAL SYMBOLS: 26
PRICES AND OTHER OPTIONAL EXTRAS
ATARI 600 XL: £160
ATARI 800XL-: £249
CASSETTE UNIT: £45
CASSETTE 1010: £49
COLOURPRINTER
LETTER: £199
LETTERQUALITY
PRINTER 1027: £299
DISC DRIVE 810: £269
DISCDRIVE 1050: £299
CP/M: £P.O.A.
TOUCH TABLET: £70
TRACK BALL: £40
LIGHT PEN: £P.O.A.
OTHER AVAILABLE LANGUAGES (C=cartridge, S=software)
MICROSOFT (D): £60 (inc. VAT)
PILOT (consumer): £60 (inc. VAT)
PILOT (educater): £90 (inc. VAT)
ATARI LOGO: £60 (inc. VAT)
MACRO ASSEMBLER: £60 (inc. VAT)
ASSEMBLER EDITOR: £40 (inc. VAT)



It's not often that a new computer system is heavily backed up by software, experience. The Atari 600 XL is one such computer. It's a modernised and extended version of the now famous Atari 400 and 800.

The 600 XL will retail for around £160 and the 800 XL for around £250. There are some major aspects which differentiate the 600XL and the previous Atari 400/800 models.

BASIC/GRAPHICS/SOUND

The Basic used is standard Atari Basic with a few additions to the graphics. Unlike the 400/800 the Basic is already built into the machine and is operative the moment you switch on.

One interesting new feature is the SELF TEST mode. This is accessed by either holding down SELECT before and after the computer is turned on, or inputing the command "BYE". You have then a four option menu. The first is "MEMORY" which tests all ROM/RAM and reports if any are malfunctioning.

The second is AUDIO/VISUAL which checks the graphics and musical channels. The third checks the keyboard, while "ALL TESTS" runs through everything.

There are 15 modes altogether as opposed to the 12 on the 400/800 models, with a maximum resolution of 320 – 192. Three modes are provided for text and graphical characters, while the other nine are used for full screen graphics or mixed graphics and text.

PLOT will plot a single point, and DRAW will draw a line to a specified position from the last coordinate used.

A potential 256 colours can be created by varying the luminosity from 1 to 16 in conjunction with the 16 available shades. SETCOLOUR is used to set the shade and luminance of the chosen colour. These will include background, border or drawing colour. Alternatively, COLOR is used in modes three to eleven for the PLOT statement. Atari still provide no conceivable way of turning off the "auto colour variation" which operates after a specified time if no key has been pressed.

Sound is produced using SOUND C,F,D,V, where C is the channel number — zero to three, F is the frequency, D is the distortion-pure tones and sound effects, and V is the volume setting from zero to 15. These channels may be synchronised to perform simultaneously.

KEYBOARD AND CURSOR CONTROL

The "Qwerty" style keyboard is very reminiscent of the Atari 800 model. There are 56 full travel keys altogether with either upper or lower case lettering. Most of the keys have auto repeat facility.

The 800's rather large reset, option, select and start have been replaced on the 600 by small flush metal buttons, which contribute to the 600's rather neat design. One new addition is the "help" key.

There are seven editing keys for cursor manipulation. When used in conjunction with CONTROL, four keys are used to move the cursor up, down, left or right. CONTROL DELETE BACKSPACE will move character to the right of the cursor, deleting each character in turn; DELETE BACK SPACE will move the cursor left, deleting characters; CONTROL INSERT is used for inserting text; SHIFT INSERT will insert a line space; SHIFT DELETE BACKSPACE will delete a line and SHIFT CLEAR will clear the screen and home the cursor.

CONTROL A to Z accesses the 26 graphical characters — another set of inverse duplicate characters are available through PRINT CHR$(128-154).

PERIPHERALS AVAILABLE

The Atari 600 XL uses a dedicated cassette — the same as the 400/800, which has twin channels, one for data and the other for music or voice. It is capable of storing 100k on a 60 minute tape and transfers data at 600 baud.

Into the same peripheral socket can be connected the new 1050 controlled logic disc drive. Colour, dot matrix and letter quality printers are also available.

Only two joystick ports exist as opposed to four on the Atari 800. As mentioned, the program-or ROM socket is compatible with all previous Atari 400/800 cartridges.

At the back of the machine is a parallel bus. This will be used to take the 48k memory expansion. In addition, a general expansion box with several slots will be available in April '84.

Into this could be plugged a whole host of goodies like voice synthesis or perhaps dual processor — let your imagination wander! I'm not sure what the power supply will look like as mine was a rather oversized prototype, but it connects with a seven pin din socket — not compatible with previous Atari power supplies. Finally there's a five pin din socket for connection to a colour monitor though Atari don't make their own!

All of this makes it a worthy son of the Atari 400/800 range — and an ideal games machine.

CONCLUSION

The Atari 600/800XL range is more flexible and adaptable than its predecessors. The 600XL is a beautifully designed machine, and like all Atari's, is a great micro for games players. However the 16k machine, priced at around £160 will meet strong opposition in the shape of the more powerful Acorn Electron. Mind you, Acorn don't have over 1,000 readily available software titles!

ATARI 400/800

HARDWARE
PROCESSOR BASED: 6502
RAM ATARI 800: 48K standard
RAM ATARI 400: 16K
ROM: 10K
POWER SUPPLY: external
R.F. OUT: built in wire
GAME PORTS: 4
VIDEO OUT: 5 pin din
SERIALPORT: 13 pin
KEYBOARD -800: 61 'Askey' style full travel
KEYBOARD -400-: 61 'Askey' style touch sensitive
NEWCASSETTE 1010: 600bps, 100K bytes, 4 track, 2 channel,
NEWDISCDRIVE 1050: BUILT/IN 6507 microprocessor, on board ROM,
TEXT DISPLAY: 40 × 25 characters

HI-Res	LUMIN	COL	MEM
40 × 24	4	4	.25K
80 × 48	2	2	.5K
80 × 48	4	4	1K
160 × 96	2	2	2K
160 × 96	4	4	4K
320 × 192	2	1	8K
80 × 192	16	1	8K
80 × 192	9	9	8K
80 × 192	1	16	8K

SOUND: four voices, 15 sound variations-distortion-, 255 pitch : variations and 16 sound levels.
BASIC: Atari extended Microsoft
USER DEFINED GRAPHICS: yes
GRAPHICAL SYMBOLS: yes
PRICES AND OTHER OPTIONAL EXTRAS
ATARI 800: £269
ATARI 400-16K-: £135
CASSETTE UNIT: £45
CASSETTE 1010: £49
COLOUR MONITOR: £P.O.A.
COLOURPRINTER LETTER: £199
LETTERQUALITY PRINTER 1027: £299
DISC DRIVE 810: £269
DISC DRIVE 1050: £299
CP/M: £P.O.A.
GRAPHICS TABLET: £P.O.A.
TRACK BALL: £P.O.A.
LIGHT PEN: £P.O.A.
OTHER AVAILABLE LANGUAGES (C=cartridge, S=software)
MICROSOFT (D): £60 (inc. VAT)
PILOT(consumer): £60 (inc. VAT)
PILOT (educational) £90 (inc. VAT)
ATARI LOGO: £60 (inc. VAT)
MACRO ASSEMBLER: £60 (inc. VAT)
ASSEMBLER EDITOR: £40 (inc. VAT)

Due to massive price decreases Atari computers are becoming more affordable to a wider range of micro users. When the Atari 400/800 was launched, the 800 retailed at around £600 and the 400 for around £400. The only main differences were the keyboards and the amount of memory supplied. If the 400 is brought up to 800 memory specifications it will be fully compatible. Many dealers selling the machines will add the extra memory to the 400 and sell it as a fully expanded machine, although Atari do not officially recommend it.

Although Atari describes both machines as all purpose micros they are built in many aspects as games machines and little business or scientific application programs exist. Also it is worth noting that on buying an Atari for programming purposes neither machine comes with Basic, this can be purchased for around £40 as a plug in cartridge.

Atari say that they expect to include the Basic cartridge plus a couple of manuals in with the price this Christmas.

BASIC/GRAPHICS/SOUND

Atari Basic is fairly standard Microsoft but unfortunately rather slow. It uses the 6502 microprocessor. String variables of up to 100 characters are allowed with a maximum of 128 variable names. The 800 comes with 48k of RAM and 10k of ROM. The memory is divided up into blocks of 16k-plug in cartridges. The 400 may also be expanded from the originally specified 16k to 48k and 10k of ROM.

Now we come to the bit you've all been waiting for — graphics! Atari graphics are excellent, giving the games programmer great potential for fast, colourful action games (providing they are in machine code!)

Inside the Atari the graphics chips have 12 different modes altogether — but the manual does not explain this fully. These modes vary in resolution together with the number of colours available.

The maximum resolution is a 320 × 192 line display although using only one colour. To get the full use of 16 colours one must use the 80 × 192 resolution. Other combinations of colours and resolution can be found in the rest of the modes.

Graphics functions are fairly powerful too. To draw a line first you must specify the starting position — ie PLOT x, y — then you may draw to another point on the screen — ie DRAWTO x2, y2. From there on you can continue to use the draw statement to draw to following coordinates.

One powerful feature is the ability to shade specified areas on the screen which saves a lot of tiresome calculation.

You have the option of using full screen of mixed graphics and text. A full set of graphics characters are available as well as the ability to create user defined graphics.

Colour is one area where the Atari excels. There are 16 colours altogether each with a luminosity of 1 to 16 giving a potential of 256 colours in total. Some amazing graphics have been created using this technique and the result is almost a life-like graphical representation.

The SETCOLOR statement is useful though takes time to get used to, as there is a separate COLOR command as well, ie COLOR 1. SETCOLOR uses three parameters — background colour, border and drawing colour — SETCOLOUR BA, BO, D.

It is also possible (by one command) to change all pixels on the screen of one particular colour to a different colour.

Atari sound will be familiar if you've ever walked into an arcade! Four voices, 15 sound variations, 255 pitch variations and 16 sound levels are used. It is possible to create almost any type of sound varying from the mellow harmonies of Chopin to the rocket blast whirl of an extra-terrestrial space ship on the rampage! Sound is output through the television speaker.

It is hard to criticise Atari sound but it lacks a duration parameter. This is resolved by the laborious use of nested loops.

KEYBOARD AND CURSOR CONTROL

The Atari 800 full travel keyboard has a nice feel though it is not perfect. I found the blip-noise — as a key is touched — irritating to the point of distraction. There are 61 keys in all including option, start and select keys. Four keys are used to move the cursor up, down, left and right and these are used inconjunction with the control key.

Delete/backspace is on one key while insert is separate. Either upper or lower case characters are available. As well as graphics characters which are accessible via the control or escape keys.

The Atari 400 keyboard incorporates all the keys on the 800 model but instead is only touch sensitive similar to that of the ZX81. I found that I had to press quite hard to get a contact. There is however a shallow rim around each key to help your finger select it!

If your price bracket falls inline with the 400



but you dislike the keyboard, you will be pleased to know you can replace it with a full travel one, for about £30.

PERIPHERALS AVAILABLE

Both cassette and disc drive are available for both micros. The cassette has a special interface, similar to that of the Commodore — so whether you already own a cassette or not you will have to fork out an extra £45 for an official one!

Actually the Atari's cassette is quite special. It has a stereo head for twin channel output. One channel is used for the data and the other for the voice or music.

Atari says that a new cassette will be available in the near future for around £50. It incorporates four tracks, two channels, auto playback facility and digital/audio signal.

Atari make a $5\frac{1}{4}$ inch disc drive which retails for around £269. This plugs into the side of the computer and the cassette may then be pluged into the disc drive!

Among the other products planned for the near future are a graphics tablet, C/PM, track ball, light pen colour and letter quality printers.

CONCLUSION

Now that the price of both the 400/800 have dropped they are both well worth considering. The 400 will perform just as well as an 800 when fully expanded. The machines are heavily backed by a range of high quality games software — although this is often pretty expensive compared to other machines. At around £269 for the 800 and £135 for the 400 we reckon these machines are worth taking a look at.



THE ORIC-1



HARDWARE
PROCESSOR: 6502
RAM: 16k or 48k
ROM: 16k-operating system and Basic interpreter.
GAMES PORTS: none
PARALLEL PRINTER PORT: 20 pin "Centronics type" connector
KEYBOARD: 57 key, membrane type-auto repeat
SOUND OUTPUT: on board speaker
SOFTWARE
TEXT DISPLAY: 29 × 27
HI-RESOLUTION: 240 × 200
SOUND: six octaves, 15 volume levels, noise and pure tone channels, six preset envelope shapes, four preset sounds — SHOOT, EXPLODE, PING and ZAP
BASIC: Oric "Microsoft type"
USER DEFINED GRAPHICS: 8 × 8 block grid
COLOURS: black, red, green, yellow, blue, magenta, cyan, white
GRAPHICAL SYMBOLS: Oric block graphics + italic greek characters
PRICES AND OTHER OPTIONAL EXTRAS
ORIC-1 16k: £99.95
ORIC-1 48k: £139.95
MICRO DISC DRIVE 3": £200
COLOUR PRINTER/PLOTTER MCP-40: £170

Despite a circulation of around 30,000 machines in France, the Oric-1 has never really taken off in Britain.

A small computer with a Spectrum-style keyboard, limited graphics and a price under £100, is bound to be compared with the popular Sinclair computer. Unfortunately the Oric-1 falls far short of the Spectrum.

The Oric-1 was introduced as the first computer under £100 with hi-resolution graphics, colour and sound. Although this may sound attractive, the main problem was that the Oric's potentially good features were badly implemented. The manual is badly documented and the ROM is full of bugs!

However we have secret plans of a new ROM which will hopefully iron out all the defects — but as yet there is no date for release.

The Oric with 16k retails for around £100, and the 48k version for around £140-more expensive than the Spectrum.

BASIC/GRAPHICS/SOUND

For the most part, the 6502 processor based machine uses what seems to be fairly standard Microsoft Basic. There are only a few extensions. IF THEN ELSE is included, REPEAT UNTIL and DEF FN may be used for numerical defined functions.

Two additional memory manipulation procedures — also found on the Nascom II — are DEEK and DOKE. DEEK and DOKE are double byte versions of PEEK and POKE which are also available.


BEYOND
CHALLENGING SOFTWARE
Goodness Gracious
UP PERISCOPE
SQUACK!
SONAR contact and the depth charges tumble
S.S. Achilles
NOBODY'S GETTING THEIR CLAWS ON MY JEWEL!
RUNS ON COMMODORE 64
Death lurked under every wave
Red Alert Alien Intruder!
RUNS ON DRAGON 32
ATARI 400/800 WITH 48K
... I must keep it out of the main corridors


What's worse than being lost in space...
IN THE FURTHEST CORNER OF THE GALAXY
SPINNING SILENTLY IN SPACE
RUNS ON SPECTRUM IN 48K
... BEING FOUND!
Kriegspiel on the Dragon
COMING SOON
Kriegspiel
Plus 'Enter the Beyond' Software Club. Absolutely free starting next year. Dont miss it. Send for details by ticking the box in the coupon below.
SPACE STATION
Zebra
and then the Aliens came...

The text display is 39 × 27 characters with either lower or upper case characters. In TEXT mode it is possible to extend the user RAM by about 7k.

I found it impossible to get an adequate screen display, despite trying two televisions. There is an R.G.B. socket at the back to supply a colour monitor, but that means spending at least another £200! Apparently, later production models had improved R.F. output modulators.

The graphics are fairly fast though are difficult to use. Three modes are provided; LORES 0, LORES 1 and HIRES. In the LORES modes, text, graphics characters and blocks can be PLOTed on the 39 × 27 grid. SCRN (X,Y) returns the ASCII value at position X,Y. In HIRES mode you may draw lines from previous plotted points, draw circles, change the way lines are drawn with the PATTERN command or fill in an area of specified number of rows. The hi-resolution is a 240 across by 200 points down with four lines of text at the bottom.

For some reason graphical modes improved the reception. In addition user definable graphics are available.

There is a maximum of eight colours. PAPER is used to set the background colour and INK will set the foreground colour. INK and PAPER may also be used in TEXT mode for coloured characters and background.

Sound is about the only area on the Oric that is good, well not fantastic! There are 6 octaves, 15 volumes, noise and pure tone channels, frequency and six preset envelope shapes. There are 4 preset sound effects which are executed by one word each. These are SHOOT, EXPLODE, PING and ZAP! That should be enough to keep anyone occupied!

KEYBOARD/CURSOR CONTROL/EDITING

There are 57 keys — most with auto repeat — planted on a Spectrum-style keyboard. The keys need a fair bit of pressure to activate them compared to the rather frictionless feel on the Spectrum. Each key produces a click when depressed, which may be turned on or off by CONTROL "F". The keys are a very narrow shape which frequently causes you to miss them. Fast typing is totally out of the question!

The space bar is sensibly placed in the normal position. The keyboard is mounted in an ugly case, though it is robust and sturdy.

Oric's cursor control is so bad it shouldn't be allowed! The procedure is to move the cursor up to the space before the beginning of the line, then press CONTROL "A" to enter the desired part of the line, changing text as necessary or deleting text with the DEL key. There is no facility to insert text or scroll part of the line to close a gap. On the good side TRON and TROFF are used to activate trace on or off.

PERIPHERALS AVAILABLE

When I tried loading and saving programs on our recorder, frequent errors arose. It was very difficult to adjust level settings although some commercially produced programs were a little easier to load.

The loading and saving procedures are CLOAD 'filename" and Csave 'filename", respectively, where the filename may be up to 17 characters in length. The loading and searching messages are printed at the top of the screen above the text window.

Micro disc drives are expected sometime early next year, and these will be Hitachi 3" size. The expected price is around £200.

Already available is a four colour printer/plotter. It prints either 40 or 80 columns a line at a speed of 12 CPS. It has its own power supply and plugs straight into the Oric. It retails for around £170.

FORTH is available in cassette form which will cost you around £18. Extended Basic and Pascal are being planned.

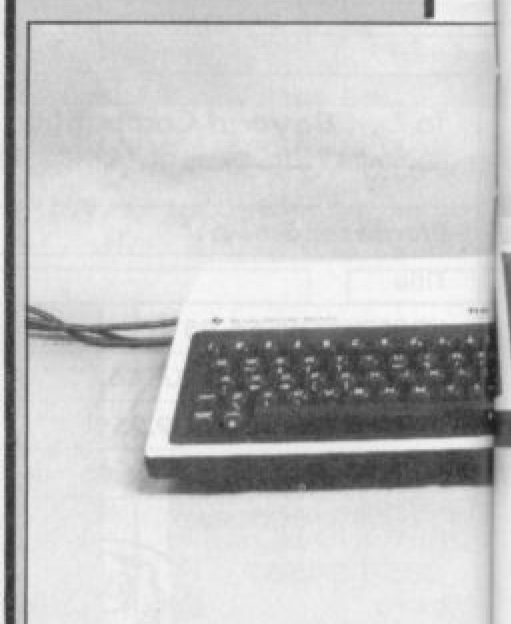
At the back of the machine is a 20 pin printer connector and a 34 pin bus expander, which will probably connect to the micro-drives — when they come!

CONCLUSION

The Oric is the cheapest colour and sound computer around, and as a games machine it offers reasonable facilities. But there is a limited amount of software backing it up — so far. The machine is aimed at beginners — but the manual is badly written, superficial in details and badly in need of an immediate revamp! The keyboard is suitable only for one finger typists. It will be interesting to see what the new extended Basic is like in terms of improving the Oric's capabilities. As mentioned Oric have produced a new ROM which they say has cleared up most of the machine's irritating features. There is growing speculation that the Oric with this new ROM will be produced in a new case — and a completely new name! Oric have not said if the ROM will be sold separately to allow existing owners to update their machines.

TEXAS

RAM : 16K (expandable to 48K)
ROM: 26K (expandable to 62K)
GAME PORTS: 2
KEYBOARD: 48 key (auto repeat), full travel, "Qwerty" layout
SOUND OUTPUT: T.V. speaker
TEXT DISPLAY: 29 × 24
HI-RESOLUTION: 256 × 192
SOUND: four channels.
BASIC: Taxas Basic (TI-extended Basic is optional)
USER DEFINED GRAPHICS: yes (8 × 8 block grid)
COLOURS: 16, transparent, black, medium green, light green, dark blue, light blue, dark red, cyan, medium red, light red, dark yellow, light yellow, dark green, magenta, grey: any one of 16 colours may be used for background or foreground. All may be on the screen at once if necessary.
PRICES AND OPTIONAL EXTRAS
TEXAS TI-99/4A: £100
PERIPHERAL EXPANSION SYSTEM: £90
DISC DRIVE: £170
DISC DRIVE CONTROLLER CARD: £120
80 COLUMN PRINTER: £570
SPEECH SYNTHESISER: £50
RS-232 CARD: £90
32K EXPANSION: £90
JOYSTICK: £25
CASSETTE: £45
CASSETTE CABLE: 10
OTHER AVAILABLE LANGUAGES (cartridge)
TI EXTENDED BASIC: £70
TI LOGO II: £70



TI 99/4a

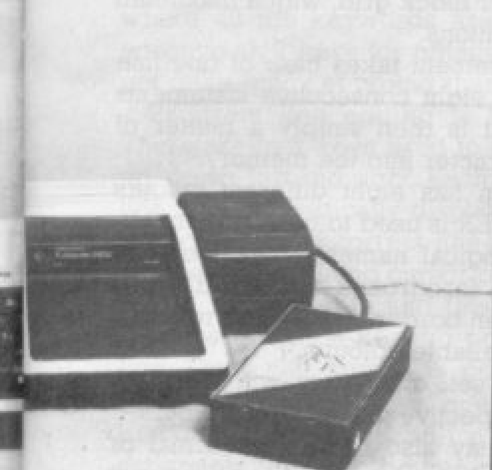
RESERVED WORDS

TI BASIC

abs, append, asc, atn, base, break, bye, call, chr$, close, con, continue, cos, data, def, delete, dim, display, edit, eend, else, eof, exp, fixed, for, go, gosub, goto, if, input, int, internal, len, let, list, log, new, next, num, number, old, on, open, option, output, permanent, pos, print, randomize, read, rec, relative, rem, res, resequence, restore, return, rnd, run, save, seg$, sequential, sgn, sin, sqr, step, stop, str$, sub, tab, tan, then, to, trace, unbreak, untrace, update, val, variable,

TI EXTENDED BASIC

abs, accept, all, and, append, asc, at, atn, base, beep, break, bye, call, chr$, close, con, continue, cos, data, def, delete, digit, dim, display, else, end, eof, erase, error, exp, fixed, for, go, gosub, goto, if, image, input, int, internal, len, let, linput, list, log, max, merge, min, new, next, not, num, number, numeric, old, on, open, option, or, output, permanent, pi, pos, print, randomize, read, rec, relative, rem, res, resequence, restore, return, rnd, rpt$, run, save, seg$, sequential, sgn, sin, size, sqr, step, stop, str$, sub, subend, subexit, tab, tan, then, to, trace, ualpha, unbreak, untrace, update, using, val, validate, variable, warning, xor



THE TI-99/4a falls into the same price range as the Oric-1, Spectrum and Vic-20, retailing at around £100.

BASIC/GRAPHICS/SOUND

There are two Basics available. These are the built-in standard TI Basic, and TI Extended Basic.

Both Basics are extremely slow. The Basic is not structured at all, being similar to Microsoft Basic. One very bad feature is the inability to have multiple statement program lines.

Two useful routines built in to the system are auto line number and line renumber procedures.

Although these are easy to use, again they take time to execute. This alone will restrict games programming quite considerably in terms of speed, as graphics animation requires detailed arithmetic calculations.

Even though the hi-resolution is 256 by 192 pixels, it's a pain to use! For a start there are no commands for drawing or plotting. The procedure is to define a character as a line segment in the intended direction, then repeat the character for the necessary length to make up the desired line.

User defined graphics are created on an eight by eight block grid using the CALL CHAR command, which determines which pixels should be set (on) or reset (off). The standard set of characters (ASCII codes 32 to 127) may be redefined, or another 31 characters from ASCII codes 128 to 159 are definable for extra characters.

Single pixels are plotted by defining a character with only one block turned "on", and then printing it in the desired screen location. With the extended Basic module in place, graphics are greatly expanded. The most important addition is the programming of sprites — like the Commodore-64. Sprites can be moved smoothly around the screen as necessary. They also may be magnified, have set speeds and vector directions. COINC is used to detect sprite collision which would be essential for use when your games character has been hit by the opponent!!

Sprites are also given a priority factor. A higher priority sprite will eclipse any lower priority sprite, without erasing it. Sprite creation and manipulation are about the only really good graphical points on the Texas.

There are 16 colours available. Two colours may be included in one defined character although all sixteen may be on the screen at any one time.

Each of the sixteen colours are different, not eight flashing like the BBC. The "subprogram" COLOR is used to set a character's background and foreground colour.

Sound is another good area! There are four individual channels which can be set to run separately or synchronised together.

The best part is that program execution may continue while sound is being played. This could be put to good use as a background tune while a game is being played. In addition there are four preset values for "white noise" and four for "periodic noise".

KEYBOARD/CURSOR CONTROL/EDITING

The "qwerty" style keyboard consists of 48 full travel keys, most with auto repeat. Quite a few features — like quotation marks — are accessible via the function key, and other combinations of CTRL and SHIFT. The general feel of the keyboard is spongy, frequently causing the wrong keys to be hit. This, of course, limits fast and accurate typing. Also the Return key is irritatingly small.

Four cursor direction keys are accessed through the FCTN key.

Although the keyboard is not of good quality, it is very strong, and is mounted in a beautifully designed metallic style case.

PERIPHERALS AVAILABLE

Cassette input is via an Atari joystick type socket, located at the rear. The lead does not come with the machine and costs an extra £10. Texas do make their own cassette recorder which is quite an expensive investment at £45, which comes complete with lead. I used a standard cheap model which loaded and saved each time without any trouble.

A whole feast of peripherals can be linked together. Unfortunately, most of these require their own power supplies.

A superb speech synthesiser may be directly plugged into the side on the machine. The realistic voice patterns that it uses are reminiscent of the Texas *Speak and Spell.*

Other peripherals like the disc drives and printer require the "peripheral expansion system", which alone costs £90! The expensive joysticks are of poor quality and retail for around £25.

All additional language modules are also very expensive. These include TI Logo-II and extended Basic which will set you back another £70 each. The power supply and PAL modulator are both external, also rather large and cumbersome.

CONCLUSION

The Texas TI 99/4a was originally very expensive but — as with most micros these days — the price has dropped to around £100 due to the extreme competition. However, even though the machine is cheap the majority of peripherals are expensive. The Basic is extremely slow, the graphics limited and without the Basic module very little in the way of games graphics can be achieved. Software is often hard to come by and it's expensive too.

SINCLAIR SPECTRUM

HARDWARE
PROCESSOR BASED: Z80A (3.5MHz)
RAM: 16K or 48K
ROM: 16K
POWER SUPPLY: external
R.F. OUT: phono socket (channel 36)
GAME PORTS: no
VIDEO OUT: no
EXPANSION PORT: edge connector
KEYBOARD: 40 (auto repeat) keys, limited travel, membrane
SOUND OUTPUT: on board speaker/cassette output
CASSETTE I/O: two 3.5 jack sockets
SOFTWARE
TEXT DISPLAY: 24 lines by 32 characters (eight by eight pixels), upper/lower case.
HI-RESOLUTION: 256 by 192 pixels
SOUND: over ten octaves; pitch and duration may be specified
BASIC: Sinclair Basic
USER DEFINED GRAPHICS: maximum of 21
COLOURS: background, border, foreground may be set from one of eight colours; normal, flash, inverse or bright settings; colours available — black, blue, red, magenta, green, cyan, yellow and white
GRAPHICAL SYMBOLS: 16 preset
PRICES AND OTHER OPTIONAL EXTRAS
SINCLAIR ZX-SPECTRUM (16K): £99 (inc. VAT)
SINCLAIR ZX-SPECTRUM (48K): £129 (inc. VAT)
ZX-MICRODRIVE (100K): £50 (inc. VAT)
ZX-PRINTER (50 CPS): £50 (inc. VAT)
INTERFACE: I: £29.95 (when bought with Microdrive)
INTERFACE II: £19.95
MICRONET 800 ADAPTOR: £99.95
Further information from:
Sinclair Research Ltd
Stanhope Road,
Camberley,
Surrey.
Tel. 0276 685311

There's no doubt that the Sinclair Spectrum is a winner. Sinclair's basic aims have always been to provide comprehensive and powerful systems at a fraction of the price of their competitors. One other breakthrough that the Spectrum — and its predecessors — has achieved is highly integrated circuitry, which drastically reduces the number of chips needed without sacrificing computer power. And it's the top games playing machine of the moment.

BASIC/GRAPHICS/SOUND

Sinclair Basic is powerful, extremely easy to learn — but very slow.

The Spectrum will space out program lines very neatly, an important factor for those users who need a clear and concise listing.

Variable names can't contain characters "*" and "—", although quotation marks can be included with the format A$ = "Hello" "Uncle" " Sinclair"! MID$,LEFT$ and RIGHT$ are not used. Instead a general string slicing procedure is applied with the expression A$ (f to 1), where f and 1 represent the first and last character numbers of the slice.

Error detection is immediate on attempting to input a line, resulting in an error cursor showing the appropriate position. This should be especially helpful to the novice programmer as it will cut down error correction on program execution.

A comprehensive set of functions exists, including the usual comparisons and mathematical operations which are all easy to use.

The text display holds only 32 characters by 24 lines making the potential for word processing extremely limited.

However, software is available to give 64 characters per line.

If desired, text may be inverted to produce a white on black effect, as well as being individually coloured. On the good side, the reception on the whole is clear and distortion-free.

LOAD"filename" and SAVE"filename" are for loading or saving a Basic program. Arrays may be loaded or saved with LOAD-"filename",DATA () and SAVE"filename",DATA (). SAVE(or LOAD) followed by "filename" SCREEN$ will save or load the screen memory.

This is useful if you have created a detailed picture, which takes a matter of seconds to load as opposed to the long winded procedure of redrawing it from within the program.

MERGE is used to merge a file from tape with the existing program in memory, overwriting line numbers and variables that already exist in the old program. However MERGE cannot be used with arrays, or specified "byte" files.

The graphics are a pleasure to use! The resolution is quite adequate for the power and cost of the machine, giving a 176 × 256 pixel display. PLOT x,y will plot a single pixel, and POINT will report if a particular pixel is set or not.

The DRAW statement may have up to three parameters: and a, where x,y are the finishing coordinates and "a" determines the positive or negative drift of the line.

Before DRAW is executive, PLOT must specify the starting co-ordinate, otherwise it will be assumed as 0,0. For example, if you want to draw an arc, say a quarter of a circle starting at position 100,100, the procedure would be PLOT x1,y1: DRAW x2,62, PI*0.5, where s1,y1 and x2,y2 are the starting and finishing co-ordinates, respectively. x2,y2 also determines the size of the arc (PI$0.5 is taken as 0.5$π radians).

DRAW x,y, where no third argument is implied with draw a straight line.

CIRCLE inevitably draws circles! Its syntax is CIRCLE x,6,r, where x,y represent the centre's location, and r is the radius.

User defined graphics are easily created using the BIN statement, and are designed on



print the words "on blue" on a blue background, but will leave the PAPER variable unchanged for text outside the PRINT statement.

OVER can also be used to "overprint" (merge with) existing characters. This could be put to good use for adding accents over letters and so on.

There is, unfortunately, no FILL command.

The colour grid is divided up into 32 columns by 24 rows (like the text screen). The snag is that each colour block contains the normal eight by eight pixel formation, and can an eight by eight block grid, with a maximum of 21 user definitions.

Each BIN statement takes care of one line on the grid, so eight consecutive statements are required. It is then simply a matter of poking the character into the memory.

The Spectrum has eight different colours altogether. PAPER is used to colour the background, INK (logical names, aren't they?) is used to colour foreground and BORDER to colour the screen border. All of these may use one of eight available colours.

IF FLASH is set, characters will flash between their respective and inverse colours.

Characters may also be set to normal or BRIGHT levels. It is also possible to interact these commands with PRINT statements e.g. PRINT PAPER 6; "on blue", which will only

All notes above middle "c" are positive, and notes below are negative. Incrementing or decrementing the pitch will result in a semi-tone raise or drop, respectively. There is no facility to create envelope shapes unless contain only one colour.

Therefore when you change the colour on a pixel, all different colours within that eight by eight grid block change to the colour you're using.

This of course means that you cannot have two different coloured adjacent pixels unless they lie either side of a block boundary. Despite this, some interesting effects have been created with multi-coloured lines!!

Sound generation techniques are very basic. BEEP is used to create a note. Duration and pitch values may be whole or fractional. machine code subroutines are applied.

The tiny built in speaker produces a distorted feeble tone, which quiet folks will regard as a blessing.

There's not much more to say about sound generation except that it is rather weak compared to other micros in the same price range such as the Vic-20 or Oric-1

KEYBOARD/CURSOR CONTROL AND EDITING FACILITIES

The keyboard is awful! There are 40 rubber keys altogether with auto-repeat, fixed to a membrane keyboard. The feel is totally frictionless, resembling calculator buttons rather than keys.

All reserved words are entered by "one key entry". This means that all statements, functions, commands, procedures and most characters are labelled — on or by the appropriate key — in different colours, depending on their function. Some keys have 6 functions!

Even the eight colours are labelled (in their respective colours) along the top! This type of keyword input was introduced on Sinclair's first computer, the ZX80 and has been followed through on consecutive machines ever since.

I found myself scanning the keyboard, scrutinising each key and all its labels each time I wanted to enter a keyword!

Despite this, many seasoned Spectrum users tell me that after a while you can memorise where all the keywords are — and the respective shift keys for obtaining them — and get quite quick at typing them in.

Program line editing is straightforward. There are four keys used to move the cursor up, down, left and right. Each time you enter a line, it is automatically displayed at the top of the screen in its correct line position.

A separate editing cursor points to the most recent line typed-in and this may be moved with the direction keys to point to any other line. Once the cursor is positioned on the desired line for editing, one must press the EDIT key — which will display that line separately near the bottom of the screen — then move the cursor to the desired position.

DELETE will delete characters to the left of the cursor. ENTER may be pressed and the line will take its place in the listing at the top.

PERIPHERALS AVAILABLE

Cassette input is via two 3.5mm jacks, though there is no remote facility for computer control. As data is being loaded into the computer the screen displays a series of moving horizontal lines within the border.

One of the most important add-ons this year for the Spectrum is the microdrives. These can hold up to 100k bytes per mini-floppy tape, with a transfer rate of 16k per second. Up to eight microdrives can be connected to a Spectrum, giving you 800K accessible storage.

The best part is that they're only £50 each (compare that to the price of an average 5" drive!). A Sinclair thermal printer is also available. These retail for around £40 and print at 50 CPS with 32 CPL.

One command will produce an exact copy of what's on the screen, to the printer! "Interface II" allows you to connect two joysticks plus ROM program cartridges that simply plug in.

Another powerful add-on for the Spectrum is the Micronet-800 modem. This will allow you to download software straight into the Spectrum via the telephone lines, and also give you access to Prestel's ¼ million pages!

CONCLUSION

What can you say about the Spectrum? For a micro priced at under £100 with 16k and under £130 with 48k, with hi-res colour graphics and sound it offers unbeatable value for money. The machine is backed up by the largest amount of games software available for any current machine and the vast majority of it is of a high quality and modestly priced. However, the keyboard is not so hot and the Spectrum's sound capabilities are limited. Its slow Basic is not suitable for the programmer who wants to create more intricate games without using machine code. Having said that the Spectrum offers a wide scope for machine code applications. Finally, it's the micro that every other manufacturer wishes they had produced!

NICK AND DAVE CHIPS WITH SOME ENTERPRISE!

Well, just who are Nick and Dave? Chips, that's who — or rather, what. Nick handles graphics and Dave the sound in the much publicised Elan Enterprise micro — officially launched in October.

But now for the bad news. You won't be able to buy one until next April. Elan will be attemping to persuade you not to buy another computer before their new micro comes on the market with a £2 million television advertising campaign.

The Elan will sell at around £200 and will have a basic 64k memory, a Qwerty style keyboard and a novel addition of a built-in joystick for playing games — or manipulating text.

Elan Enterprise marketing manager Mike Shirley says that the company will be making 150,000 computers a year and is aiming for a 10 per cent share of the British micro market. He added that Elan wanted to produce a machine better than the BBC and sell it at half the price.

If you want to you can join the Elan users club even before you've laid a finger on the keyboard of one of these mysterious machines. The club promises newsletters and special offers for potential Elan users.

As for the rest of us, we'll just have to wait until the Spring before we can find out just what Nick and Dave can do.



ARCADE ACTION!

FOR THE

ORIC-1 commodore 64



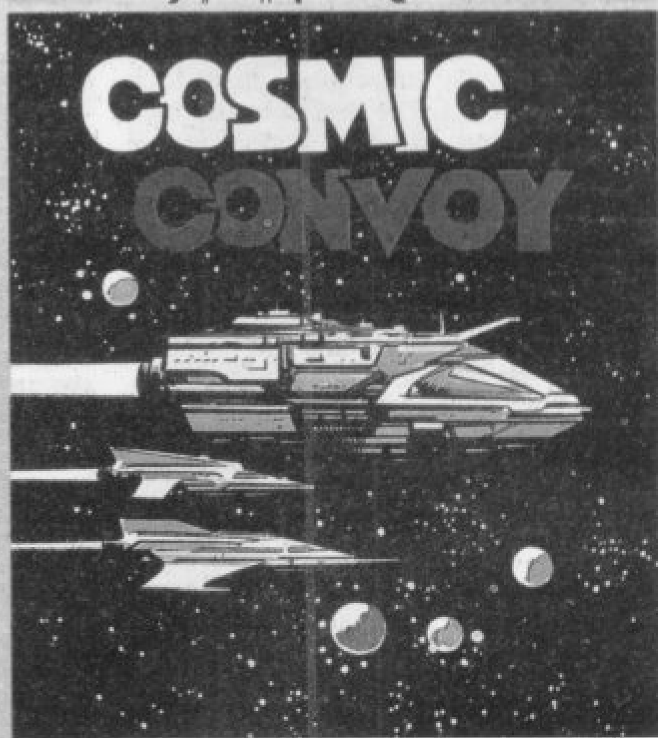


DIG DOG

Fast action tunnelling as Max the Mutt races for his long-buried bones. Run like hell through this 100% machine-code game. Dodge and turn — if you're quick and smart you'll survive — hang around and we'll throw you to the rats!

Very adictive.





COSMIC CONVOY

Huge transporters ferry the vital supplies across the dangerous space-lanes, always in convoy. You command a small desperate group of Hyper-Viper destroyers. Save the entire population by protecting as many transports as you can, against the nastiest pirates in the cosmos. 100% machine-code.

So much more than shoot-em-up.

£6-90 EACH

Includes VAT & 1st Class Post & Packing

Realize the true power of your Oric or CBM64.

TASKSET LTD

brings you real arcade style games with all the features you rightly demand; 100% machine code speeds, smooth flicker-free hi-res graphics, great sound, hall of fame, player options, and of course, the very best in original concepts.

Dealer enquiries welcome — call (0262) 602668
Mail or telephone orders to:- Taskset Limited
13, High Street BRIDLINGTON Yorks. YO16 4PR
Bridlington (0262) 73798 24 hrs.

STOP PRESS — Watch for 2 new CBM 64 titles Super Pipeline and Jammin'.

SCREEN GEMS

The *Computer and Video Games* review team has been hard at work throughout 1983 bringing you news of all the top games for all the popular computers. On this page we take a look back at games we have tested during the past 12 months and pick our favourites. So once you've chosen your micro — using our Gamers Guide of course — you'll be able to select games software to go with it!

BBC TOP TEN

PLANETOIDS Brilliant version of the arcade game defender. Without doubt the finest shoot-em-up available on any micro. Acornsoft £9.95.
KILLER GORILLA Help Mario climb the Empire State Building and rescue the girl from the monkey's evil clutches. Program Power £6.95.
SPACE ADVENTURE Explore a drifting and apparently empty space ship. A graphical adventure with real time action. Virgin £7.95.
ZALAGA A galaxians type game but with much much more action. Squadrons of aliens swoop past and dive bomb your laser base. Will test even the most experienced vidkids to their limit. Aardvark £6.90.
PHILOSOPHER'S QUEST Classic Dungeons and Dragons adventure cleverly written with lots of twists in the plot. Acornsoft £9.95
PAINTER A simple but very addictive game. Travel round the maze filling the squares with colour while avoiding the pursuing monsters. A&F £8.00
SNAPPER Of all the Pac-man clones available for the BBC this version comes closest it's hard to believe that it's not the real machine. Acornsoft £9.95.
HOBBIT Text only adventure based on Tolkien's world famous book. Melbourne House £14.95.
STARSHIP COMMAND Save the galaxy from the evil clingons and become the Federation's top Starfleet Commander. Acornsoft £9.95

SPECTRUM TOP TEN

JET PAC Fly around the planet gathering pieces of space craft. When assembled and fuelled blast off to another planet. Ultimate £5.50
MANIC MINER Miner Willy has to climb twenty screens of obstacles to win his prize. Bug Byte £5.95
ARCADIA Several waves of aliens queuing up to attack your ship. Imagine £5.50
THE HOBBIT Graphics and text adventure based on Tolkien's world famous book. Melbourne House £14.95.
JUMPING JACK Hop your little man up through a precarious series of moving platforms to find out the mystery poem. Imagine £5.50
PENETRATOR Scramble type game — fly your ship through tunnels and city skylines — bombing and shooting the radar bases and fuel dumps. Melbourne House £6.95
FLIGHT SIMULATION Take off, fly, and land an aircraft with authentic flight controls. Psion £7.95
TRANZ AM Shades of Mad Max as you drive through America searching for fuel and the seven gold cups of Ultimate. Ultimate £5.50
SCRABBLE Play the classic board game on this superb computer version. Psion £14.95
SPLAT! Help Zippy survive the rocks and spikes and make sure he eats enough grass to keep his strength up. Incentive £5.50.

COMMODORE 64 TOP TEN

HOVER BOVVER An original game involving mowing lawns, but watch out for the flower beds and your erratic dog Rover. Llamasoft.
STIX Trap the roaming spark in your force field. Looks a simple game but becomes really challenging. Supersoft.
THE HOBBIT Graphics and text adventure based on Tolkien's world famous book. Melbourne House £14.95.
ATTACK OF THE MUTANT CAMELS Destroy an army of laser spitting mutated camels with your flying laser cannon. Llamasoft
SKRAMBLE Earth has been taken over by an alien being. His defences are formidable rockets, fireballs, meteors and dangerous tunnels have to be defeated before you get a chance to destroy him. Anirog.

ATARI TOP TEN

DONKEY KONG Carpenter Mario duels with the gorilla yet again, in a bid to save the kidnapped girl. Atari £29.95.
QIX Trap the roaming spark in a force field, simple to understand but very difficult to master. Atari £29.95.
MINER 2049'er Help "Bounty Bob" explore the gold mine and claim it for himself. Danger lurks in every mine shaft from uranium mutated creatures. Calisto £29.95.
DEFENDER Landers, mutants, pods and baiters they're all there no compromises have been made in this superb all action game. Atari £29.95.
S.S. ACHILLES You must abandon your damaged space ship in the escape shuttle, but you must collect the supplies littered around the ship before it's destroyed. Beyond £14.95 (disc).
ZAXXON A three dimensional defender type game. Battle through the defence forces to reach the robot. Coleco £29.95.
POLE POSITION You've got to keep a steady hand on the wheel even to qualify to race against Atari's top ten drivers. Atari £29.95.
CENTIPEDE A copy of the arcade game where your job is to make sure the garden is free of all those nasty pests. Atari £29.95.
MINED OUT Cross the treacherous minefield saving damsels in distress as you go. Quicksilva £6.95.
GALAXIANS Protect your laser base from the swarms of diving bird men. Atari £29.95.

VIC 20 TOP FIVE

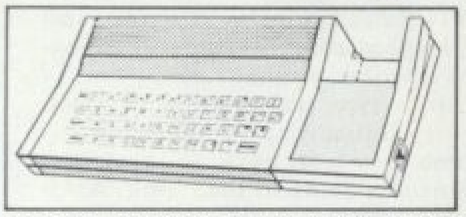
CHOPLIFTER Rescue the hostages and fly them safely back to base. Great flight graphics as the chopper banks and dives in this action packed cartridge from Audiogenic at £24.95
TUTANKHAM The hit arcade game converts splendidly for the Vic. A real winner of a cartridge from Parker Brothers at £29.95
ARCADIA Good standard shoot 'em up with a variety of aliens. Imagine £5.50
OMEGA RACE A most accurate conversion of a little known — though incredibly addictive arcade game. Commodore's best cartridge at £9.99
SKY HAWK A hybrid of Defender and Scramble with exceptionally good graphics. Quicksilva £5.95

TEXAS INSTRUMENTS TOP FIVE

PARSEC Superb scrolling shoot 'em up with speech synthesis. TI's best game at £29.95
ALPINER The best talking game for any computer. Mountain climbing game with a few surprises £24.95
SOCCER The TI plays an excellent game of football with this first division cartridge £14.95
MUNCH MAN TI's answer to PacMan. If you must have a gobbling game for your micro then this is it. £29.95
CHISHOLM TRAIL All action grid style shoot 'em up. This one will really test your reflexes. £19.95

HOME COMPUTERS

20K AQUARIUS



AQUARIUS: The brand new Aquarius Personal Computer is part of Mattel Electronics latest developments in advanced technology and offers full home computing facilities, as well as extensive game play, using a very wide range of plug in cartridges. Since Aquarius is a Mattel Electronics product, it benefits by the company's wide experience of producing high technology equipment, as well as their game programming expertise which is evident from the advanced games which have been produced for the Intellivision. Aquarius costs £49 and comes with microsoft basic built in. It is so simple to use that you'll be writing your first programs within minutes of taking the machine out of its box. You can even record the programs on your own cassette recorder at home, so you can use them again at a later date. Most available domestic tape recorders are compatible with the Aquarius.

A POWERFUL MACHINE: For all it's simplicity, it is also very sophisticated. It has a Z80A processor and it comes with 8K of built in ROM and 4K of RAM, expandable to 52K. It has a display of 40 x 24 characters, and a graphic resolution of 320 x 192 with a total character set of 256 (including the complete ASCII set with upper and lower case letters, numbers and additional graphic symbols). The keyboard has 49 full stroke moving keys, unlike some of the cheaper machines which have membrane keyboards. The size of the machine (excluding any of the additional peripherals), is 13" x 6" x 2".

PERIPHERALS: It is very easy to increase the capabilities of your Aquarius as all the peripherals plug straight into one another. You can add a Printer, a Modem, a Data Recorder, Mini Expander and other items. All of the peripherals are very easy to install and what is more, they're easy to use. But the best news of all is, they're easy to afford.

CPM OPERATING CAPABILITY: The Aquarius is capable of being expanded to 52K RAM and later in 1983 a disk drive will be available for it, with the commercial CPM business operating system. This will allow you access to one of the largest software libraries in the world, with literally hundreds of programs available for you to use.

CARTRIDGES: Various sophisticated programs have been launched on plug in cartridges such as a Visicalc spreadsheet and a word processor. Other cartridges include popular Intellivision titles and are available for as little as £12.95.

4K Mattel AQUARIUS – £42.61 + VAT = £49
20K Mattel AQUARIUS – £67.83 + VAT = £78

£49

ATARI 400/800



NEW LOW PRICES

ATARI 400/800: With the Atari Personal Computers, you can play the ultimate in T.V. games, teach yourself new subjects or skills, balance budgets, and even write your own computer programs in Basic.

SPECIFICATIONS: Both the Atari 400 and 800 can display in up to 16 colours, each with 16 intensities. They have four independent sound synthesizers for music tunes/game sounds, giving four octaves with variable volume and tone control on your T.V.'s speaker. The display graphics are of amazing quality, having a detailed resolution of 320 x 192, comprising 24 lines of 40 characters. Atari personal computers have a standard 10K ROM operating system. In addition to this the standard Atari 400 (£99) comes with 16K of RAM and the expanded version with 48K (£158). The Atari 800 (£249) comes with 48K as standard. Both the 400 and 800 are now supplied with a FREE £40 Basic Programming Kit, which includes the Basic Programming Cartridge, as well as a 120 page Basic Reference Manual and the 184 page Self Teaching Manual by Bill Carris called 'Inside Atari Basic', so you can begin programming straight away, without buying any 'extras'. Even a mains plug is supplied!

OVER 500 PROGRAMS AVAILABLE: The Atari computers are supported by well over 500 programs available for your use, a larger selection than you will find on any other television game or home computer! The wide selection puts Atari way ahead of the competition. Just fill in the coupon and we will be pleased to send you a full price list which gives details of our range of software available for entertainment, home education, programming and home office use. We think you'll agree when we say it's quite impressive.

100 FREE PROGRAMS FROM SILICA SHOP: If you buy your Atari 800 from Silica Shop, you will receive a FREE presentation pack of 6 cassettes containing 100 programs, including games, utilities and demonstrations. Unfortunately, because of the low price at which we are offering the Atari 400, we are unable to give the programs with both machines. However, as a special offer, we are selling the programs to purchasers of the Atari 400 for only £14.95, less than half of the recommended retail price of £30. Silica Shop offer a TWO YEAR GUARANTEE on both Atari 400 and 800 home computers.

ATARI 400 With 16K – £86.08 + VAT = £99
ATARI 400 With 48K – £137.39 + VAT = £158
ATARI 800 With 48K – £216.52 + VAT = £249

£99

VIDEO GAMES

COLECOVISION



THE SYSTEM: The CBS Colecovision offers new standards in video game play. The excellent graphics are well implemented with arcade titles such as Zaxxon, Lady Bug, Gorf, Wizard of Wor, Carnival, Mouse Trap and the lovable Smurfs. The console comes supplied with a three screen arcade quality version of DONKEY KONG. Parker and other companies have also announced ranges of cartridges for Colecovision, to further enhance the wide range of quality titles available for this new television games machine.

THE CONSOLE: The CBS Colecovision video games system has advanced technology which produces superlative graphics resolution and excellent sound effects. The styling of the console and hand controllers has been carefully researched; the console is designed to complement modern hi-tech equipment, and has clear features for easy operation. The hand controllers allow fingertip control via the 8 direction joystick, and feature 2 independent fire buttons. The push button keyboard is used for game selection and for game control with some cartridges. The hand controllers are detachable and are connected to six feet of telephone coil cable, storing neatly away in the console when not in use.

ATARI EXPANSION MODULE: The Atari converter module allows Atari VCS software cartridges to be played on the Colecovision console, allowing owners the freedom to purchase from the extensive range of Atari compatible cartridges. It also means that existing Atari owners can buy the CBS Colecovision games system without discarding their software library. Silica Shop offer part exchange facilities if you wish to upgrade.

TURBO EXPANSION MODULE: The Turbo Driver Expansion Module allows you to actually drive the vehicle that appears on your T.V. screen. The module consists of a steering wheel, dashboard and accelerator pedal. One hand controller is mounted on the dashboard to provide a gear change unit. The module comes complete with a Turbo Driver cartridge, the first of several cartridges to make use of the module, which provides all the action of sitting in the driving seat. This facility is unique to CBS Colecovision.

HOME COMPUTER EXPANSION MODULE: The Home Computer Module scheduled for late 1983, allows conversion of the games unit into a sophisticated Home Computer. This flexibility of design is an important feature of the CBS Colecovision System.

COLECOVISION - £127.82 + VAT = £147

£147

VECTREX



THE SYSTEM: Vectrex is a totally unique Home Arcade System, which has been exclusively designed and engineered to duplicate real arcade game play. Complete with its own monitor display, Vectrex won't cause any arguments over the use of the family's television because it has its own built in screen.

THE SCREEN: Vectrex does not use ordinary display techniques, instead it uses vector scanning to control the images on the screen. With this scanning method, the gun only updates the area of the screen that has changed, whereas a normal T.V. re-transmits the ENTIRE screen 50 times a minute. It is this that gives Vectrex its speed, and means that very little computer power is required for screen control, and the results provide very fast responding and clear images. These 'Vector Graphics' are used in several arcade games such as Asteroids and Battlezone, to give you incredibly high resolution and quality. Vectrex brings all of this from the arcade right into your living room. The Vectrex screen is capable of displaying 80 columns by 40 lines, which is significant to the extensive developments planned for the system.

EXCITING SOUNDS AND ELECTRONICS: Vectrex has an advanced microprocessor with more speed and power and exciting effects than many home video games systems.

REAL ARCADE CONTROLS: Vectrex has a unique control panel, similar to those used in many real arcade games, with 4 concave action buttons and a full 360° self centering joystick. This control panel has a 4 foot detachable cord for maximum player freedom.

REAL ARCADE GRAPHICS: Vectrex has its own 9 inch vertical screen and unlike a conventional T.V. screen, uses advanced display technology to achieve brilliant, high resolution imagery and superb game play never before possible. The Vectrex display provides special effects too, such as 3-D rotation and zooming in and out, which a regular T.V. cannot match. Using a black and white monitor, each Vectrex game comes supplied with its own coloured plastic screen overlay to add to the excitement of game play. The range of Vectrex cartridges (£19.95 each), gives a good selection of arcade games such as Berzerk, Scramble, Rip-Off and Bomber Attack. Vectrex comes complete with a fast paced 'Minestorm' game built into memory.

VECTREX: Vectrex has an advanced state-of-the-art microprocessor with more speed than other T.V. games.

VECTREX – £112.17 + VAT = £129.00

£129

WHO ARE SILICA SHOP?

Silica Shop are one of the leading specialist suppliers of Video Games & Personal Computers. We consider that our service, to those who already own or to those who are interested in any products in our range, cannot be matched by any other supplier. Just look at what we have to offer:

- SHOP DEMONSTRATION FACILITIES - we provide full demonstration facilities at our shop in Sidcup, so that you can get 'hands on' experience of our range.
- SHOP OPENING HOURS - we are open from Monday to Saturday 9 am - 5.30 pm, but close at 1 pm on Thursday's and 8pm on Friday's.
- MAIL ORDER - we are a specialist mail order company and are able to supply goods direct to your door at no extra cost.
- FREE FIRST CLASS DELIVERY - all orders are sent Post and Packing FREE, most of them being despatched by FIRST CLASS POST within 24 hours of us receiving your order details. If you require overnight delivery, this can be arranged at a charge of £3 for items under £50, or alternatively £5 for items over £50.
- MONEY BACK UNDERTAKING - if you are totally dissatisfied with your purchase, you may return it to us (in good condition) within 15 days for a full refund.
- PART EXCHANGE - we will offer you up to one third of our current selling price in part exchange on your old Mattel Intellivision or Atari console (and related cartridges), if you decide to buy a new video game or personal computer from us.
- SECONDHAND GOODS - we sell secondhand Mattel & Atari consoles/cartridges (with a full 1 year guarantee), at two thirds of our normal retail price.
- COMPETITIVE PRICES - both our prices and service are very competitive. We are never knowingly undersold and will normally match any bona fide price quoted by our competitors, providing they actually have the goods in stock. We will also send the order to you post and packing free!
- HELPFUL ADVICE - our specialist sales staff are always available to give you advice on the suitability of various computers or T.V. games.
- SERVICE/REPAIRS - are available on all machines in our range, often utilising our in house service facilities. We will support your machine long after you buy it.
- ATARI SERVICE CENTRE - we are now an authorised Atari service centre and can therefore accept repairs on all Atari equipment (TV Games and Computers) even if you did not originally purchase it from Silica Shop. All repairs during the manufacturers 1st year warranty period will be completed FREE OF CHARGE.
- 2 YEAR GUARANTEE - we offer a 1 year extension on some manufacturers 12 month guarantee, including Atari Personal Computers.
- VIDEO GAMES AND COMPUTER CLUBS - we offer a full information service on all video games and computers in our range. Advanced information on many new developments is often included, so you are always kept informed. We now issue regular newsletters on software releases so make sure that you join our club.
- OVERSEAS ORDERS - we regularly send goods overseas and use various despatch services. Please let us know your requirements and we will give you a quotation.
- PAYMENT - we accept Access/Barclaycard/Visa/American Express/Diners Club credit cards, as well as cash, cheques, postal orders, COD or Post Office Transcash.
- CREDIT FACILITIES - we also offer credit facilities with varying payment over 12, 24 or 36 months. Please send for our FREE literature and a written quotation.

☎ 01-309 1111

SILICA SHOP

SILICA SHOP LIMITED, Dept ZCVG 1283
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX
Telephone: 01-309 1111 or 01-301 1111

ANIROG SOFTWARE

24 HR. CREDIT CARD SALES HORLEY (02934) 6083
PAYMENT BY CHEQUE, P.O., ACCESS/VISA
8 HIGH STREET HORLEY, SURREY.
Overseas 50p post & packaging

TRADE ENQUIRIES WELCOME
29, West Hill, Dartford, Kent. (0322) 92513/8

COMMODORE 64

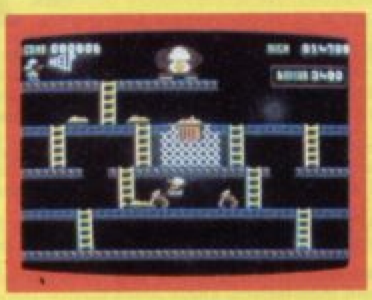
AS SEEN ON T.V.!

KONG — KB / JS — £7.95

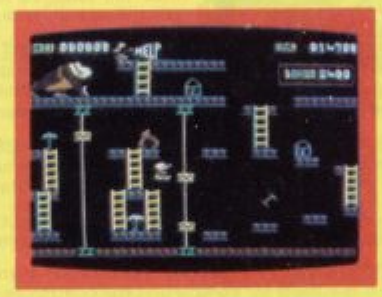
A 31 K ALL M/C PROGRAM WITH BRILLIANT ANIMATED GRAPHICS



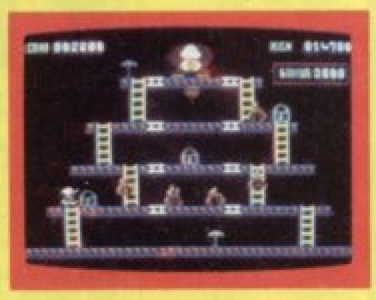
1. CHASING FIREBALLS AND BARRELS, CAN BE SMASHED BY THE MALLET IF YOU CAN JUMP UP AND GET IT.



2. JUMP OVER THE PIES AS YOU RUN ALONG THE CONVEYOR BELT MAKE SURE YOU DONT END UP INSIDE THE COOKER.



3. THE ONLY WAY UP IS BY THE LIFT WHICH IS UNDER A CONSTANT BARRAGE OF GIRDERS.



4. KNOCK OUT ALL THE SUPPORTS BY RUNNING OVER THEM AND WITNESS THE SPECTACULAR COLLAPSE OF KONGS LAIR.

SKRAMBLE — J.S. — £7.95

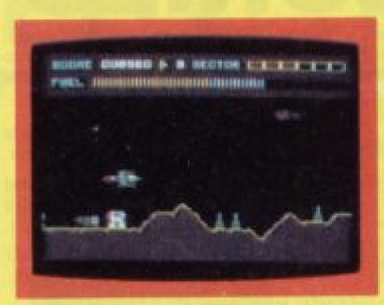
PILOT YOUR SPACE CRAFT THROUGH THE SIX DEFENCE SECTORS AND DESTROY THE COMMAND MODULE OF THE **COBRON** EMPIRE. A 32 K ALL M/C BLOCKBUSTER.



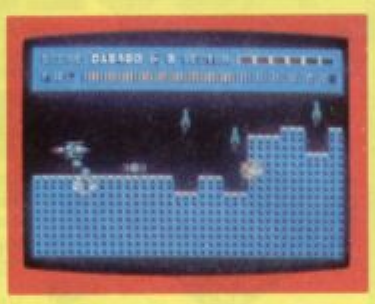
1. RAMMING MISSILES HURTLE TOWARDS YOU.



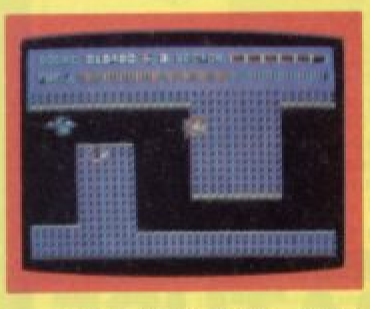
2. FIGHT COBRON QUASER ION SHIPS.



3. DODGE THE FIREBALLS, BECAUSE YOU CAN'T SHOOT THEM DOWN.



4. CITY WITH HIGH RISE BUILDINGS.



5. GUIDE YOUR SHIP WITH DEXTERITY THROUGH THE MAZE.



6. DESTROY THE BASE BEFORE YOU RUN OUT OF FUEL.

HEXPERT — J.S. — £7.95

THE EVIL WITCH ZOGANAAR HAS FORCED BERT TO PLAY ON HER 3D HEXAGONAL PYRAMID. AS HE JUMPS FROM STEP TO STEP OF THE PYRAMID. MASSIVE RUBBER BALLS BOUNCE DOWN THE PYRAMID TO CRUSH HIM. HER PET SNAKE, **COILY**, MOVES UP AND DOWN THE PYRAMID CHASING BERT. YOU HAVE TWO SPINNING DISC'S TO JUMP ON TO AND LURE **COILY** TO HIS DEATH. CAN YOU MAKE BERT THE HEXPERT?
A SUPERB ALL M/C GAME WITH EXCELLENT 3D GRAPHICS.



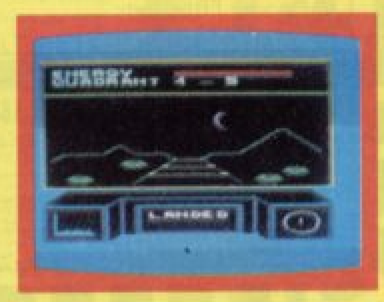
MOON BUGGY



EXPERIENCE ALL THE THRILLS OF THE ARCADE GAME AS YOUR PATROL CRAFT MANOEUVRES OVER THE GIANT POT HOLES.

J.S. — £7.95

3D TIME TREK



A 3D STAR TREK GAME WITH REAL ARCADE ACTION BATTLE WITH THE ALIENS.

K.B. / J.S. — £5.95

DUNGEONS



ENTER THE REALMS OF FANTASY WITH SUPERB USE OF SPRITE GRAPHICS BATTLE WITH THE FEARFUL FIRE BREATHING RED DRAGON

K.B. — £6.95

FROG RUN



A POPULAR ARCADE GAME BROUGHT TO LIFE WITH BRILLIANT ANIMATED GRAPHICS

K.B. / J.S. — £5.95

GRAPHICS

By Garry Marshall

MAKE THE MOST OF SPRITELY TEXAS!

Sprite graphics are becoming available on more and more personal computers, including the Texas Instruments TI99/4a, the Commodore 64, the Sord M5 and the Atari computers.

A newcomer to sprite graphics may wonder what all the fuss is about, and can have difficulty in finding out exactly what a sprite is.

The manual for Texas Instruments' Extended Basic, for example, says only that "sprites are graphics that can be displayed and moved on the screen".

This isn't very helpful. I'll try to explain what sprites are so, armed with this knowledge, you will be able to make full use of them.

A sprite has much in common with a graphics character in that it has its own shape, colours, and can be displayed on the screen.

Although it has other properties than these, a sprite usually exceeds an ordinary graphics character even in these aspects. The first way that it does this is in its positioning on the display screen.

Whereas a graphics character can be placed only in character positions, a sprite can be placed at any dot position. That is to say, its top left corner can be positioned at any dot on the screen.

Because of this a sprite can move smoothly over the screen, while a graphics character inevitably jerks from position to position when it is moved. Secondly, a sprite can be much larger than a graphics character so that its shape can be designed in much more detail.

On the TI99/4a, for example, a sprite can be the same size as four graphics characters, and on the Commodore 64, where characters have an 8×8 dot matrix, sprites occupy a grid of 24×21 dots.

What makes sprite graphics really exciting and different from ordinary graphics, however, is that a sprite can be given a speed and a direction in which to move with a single instruction.

Once this instruction is issued, the sprite is automatically kept in motion in the specified direction and at the given speed without the need for any further action on the part of the programmer.

WHEN SPRITES MEET

This is invaluable in programming a wide range of games. As well a this, with sprite graphics a three-dimensional effect can be achieved with some ease because a sprite can be assigned a level of importance.

When two sprites meet each other the more important one passes over the other so that it can always be seen on the screen while the less important one is obscured.

So, in a game where a spaceship is flying past a planet, if the sprite for the spaceship is more important than that for the planet, the spaceship will appear to pass in front of the planet whenever they meet.

Sprite graphics systems provide the means for manipulating sprites in many ways. To give just one example, they can usually detect automatically when two sprites meet each other.

On the T199/4a this is done with the CALL COINC sub-program and on the Commodore 64 by examining memory location 53278, although when using Simon's Basic on the 64 a DETECT command is provided for this purpose.

Next issue I'll be bringing you more information about the graphic capabilities of your computer.

NOW, READ ALL ABOUT IT!

Books on video games for micros are now very common. Usually they consist of program listings for a particular machine, and they may or may not include reasonable explanations of how the programs work.

Good examples of this kind of book are the *Commodore 64* Games Book by Clifford and Mark Ramshaw (Melbourne House) and *The Spectrum Book of Games* by M. James, S. M. Gee and K. Ewbank (Granada).

You can learn a lot about programming in Basic by typing into your computer the programs in books of this kind, as well as having the fun of playing the games. And if you don't want to be bothered with the typing, many of the books have an associated cassette containing the games programs which you can purchase.

However, I've been looking at a volume on games and graphics that is quite different from the usual books, and which is an exciting source of many and varied ideas. The book is *Pascal Programs for Games and Graphics* by Tom Swain, (Hayden Book Co.), price £15.95.

First, don't worry that the games are written in Pascal rather than Basic, for this is an advantage, or can be turned to advantage, in several ways. The use of Pascal means that it is very easy to see how the games are written.

In fact, once you have digested the formalities of Pascal, which needn't take very long, the Pascal programs can be regarded as precise descriptions of games. This opens the possibility of converting them to Basic, perhaps after amending them to suit yourself, which is surely more fun, and more instructive, than simply typing listings.

The games in the book have names like Lasergraph, Moonport and Light Bikes which indicate rather well what they are about. In fact, the games are a decided improvement on what is usually found in the books of Basic listings.

The graphics are also impressive, and enhance without fail the games in which they appear. They are written for the Apple II and IIe computers, but can readily be adapted to any other computer with a similar graphics capability.

The book also gives listings for a graphics editor with which graphics can be designed and then saved.

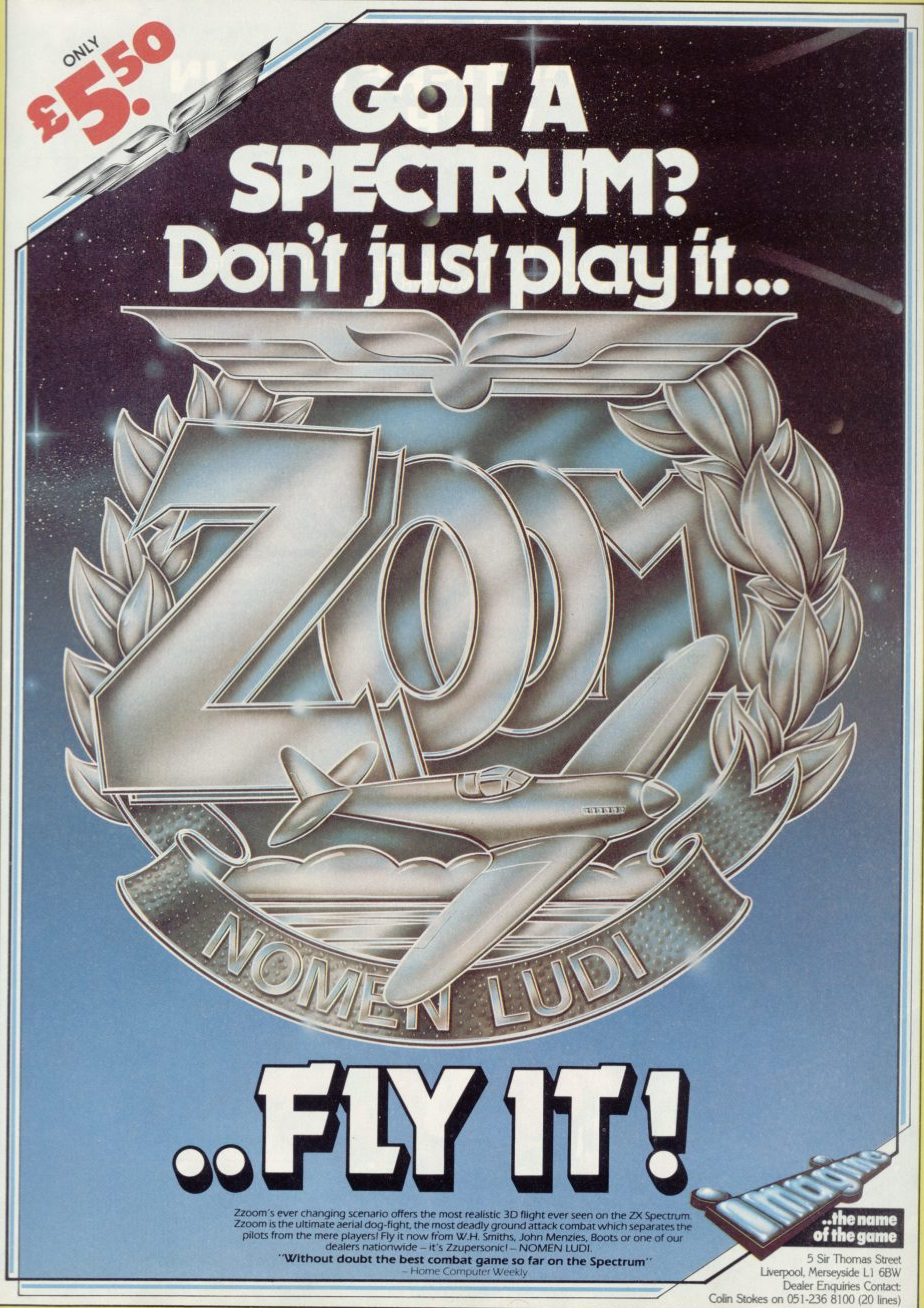
Once a graphics display is saved it can also be manipulated and printed out or, if you are lucky enough to have a plotter, it can be plotted.

This capability for handling graphics is invaluable to any programmer who uses graphics a great deal. While it will not be particularly easy to adapt the suite of programs for the graphics editor to Basic, the attempt will be very rewarding, and the Pascal programs do show very clearly how it can be done.

All in all, *Pascal Programs for Games and Graphics* is a highly stimulating book full of ideas for games and graphics. As an extra bonus, if you have ever wondered what Pascal is all about, or if you have wanted enlightening about structured programming, the excellent programs in this book can throw a good deal of light on both matters.

Finally, two books have appeared recently that contain numerous illustrations showing what is possible with state of the art computer graphics. They are *The Computer Image* by various authors (Addison-Wesley) and *Computer Images-State of the Art* by Joseph Deken (Thames and Hudson). They contain examples of images from areas such as computer art, modelling, simulation, computer-aided design, computer-aided manufacture, mapping and even choreography — done on an Apple, incidentally.

Although both are more than picture books, their illustrations show the incredible computer-generated images that can now be produced in the wide range of areas where computer graphics is used.



ONLY
£5.50
GOT A SPECTRUM?
Don't just play it...
ZOOM
NOMEN LUDI
..FLY IT!
Zzoom's ever changing scenario offers the most realistic 3D flight ever seen on the ZX Spectrum. Zzoom is the ultimate aerial dog-fight, the most deadly ground attack combat which separates the pilots from the mere players! Fly it now from W.H. Smiths, John Menzies, Boots or one of our dealers nationwide – it's Zzupersonic! – NOMEN LUDI.
"Without doubt the best combat game so far on the Spectrum"
– Home Computer Weekly
imagine
..the name of the game
5 Sir Thomas Street
Liverpool, Merseyside L1 6BW
Dealer Enquiries Contact:
Colin Stokes on 051-236 8100 (20 lines)



CHRISTMAS CRACKER!

BY KEITH CAMPBELL

"What are you thinking of doing for the Christmas issue?" asked Tim, our production editor, always eager to tick off unfilled pages.

I nearly choked on my coffee. With the August heat making me sticky with perspiration, nothing could have been further from my mind than Christmas. But words have to be written long before the magazine reaches the newsstands, so I shut my eyes and thought of snow.

The heat pouring in through the window became a blazing log fire, and the pub lunch settled in me like Turkey and Christmas Pud. I pictured the telly, the Queen just finishing and the obligatory Christmas circus about to start. Circuses! Ghost stories! Eureka! My Christmas review!!

I so startled the office that Linda pasted a title upside down, and Clare stopped dead in the middle of a Rebecca Corwell letter . . .

Your car out of petrol miles from anywhere, empty can in hand, you cross the fields in the gathering dusk.

Suddenly you come across an unnerving site — a big-top complete with all the usual trappings — a generator, maintenance wagon, and animals. Entering the tent you find the ring, where all is deserted. But wait! Is that a clown running off into the shadows?

What to do now? To pass the time, here's a chance to become a circus artiste. Tame the cats, try your skill on the trapeze, and maybe walk a tightrope! I found I made a rather nasty mess on the canvas when shot from the cannon, but my tightrope walking is coming on a treat! I no longer get killed when I fall off!

What's the point of it all? To discover that, you will have to play *Circus* for quite some time, and to reach your goal, even longer!

Circus is one of Brian Howarth's *Mysterious Adventures*, and did, on occasions, send a cold shiver down my

MADNESS MINOTAURS AND A PHILOSOPHER

Help is at hand for David and Jean Symonds, thanks to two players of *Madness and Minotaurs*. Mushrooms do come into the game later, but for now — simply find the small lamp on the first level and type "LAMP ON". You can then descend!

"I can understand their agony," writes Robert Moss of Basildon. "The criminal thing is that one single command will change everything."

W. Pooley of Liverpool also sent in this tip, and in return requests help in *Jerusalem Adventure*. Any offers on how to get through the Golden Gate?

Some pleas I receive are quite difficult to satisfy. But I try my best so here goes!

Attention Mrs Oxley of St Andrews, Fife. I hear that you have taken over your son's *Espionage Island*. Shame on you! Take it from me, it's no use staying up till 2 a.m. trying to kill the native woman. Play the game, or rather, stop playing the game, and let David have a go!

Here's another difficult one. Simon Marsh from New Malden says some very flattering things about the Adventure feature, suggesting that I take over the whole magazine! He offers some criticism though — "I notice your pages are coming under attack from Spectrum owners. Please don't let them take over, like they have in xxxxxxx Computing xxxxxx," he implores, "e.g. NO HOBBIT PROBLEMS!!!" Over 100 pages with no mention of Hobbit, Simon? Impossible! It's the most popular game in the world — isn't it?

Can anyone get cheese in *Philosopher's Quest?* Or find David Somekh of Wanstead a shaggy dog after giving a woman a less shaggy one? Come to think of it, has anyone completed *Philosopher's Quest* yet?

Denis Field of St Albans can't escape the *Castle of Riddles* courtyard. Directions N, E, and W all lead him to very short-lived excursions. Is it the same for you too?

Dark Crystal is a game seldom mentioned in despatches, so any offer of help for David Johnston and Gareth Dart of Gwent would be much appreciated.

Special hints are printed upside down — but there are other clues hidden, as usual, within the reviews and chit-chat. Those who know the answers will no doubt recognise these. If you are searching for help about a game mentioned here, study my words carefully — even the headlines may help!

Help is also at hand for me, now. Your letters are starting to pile up too high too fast. I like to ensure each of you gets a reply, so I turned the tables on my most prolific correspondent, and persuaded him to give me a hand.

Welcome to Simon Clarke, whose name you may have seen a few times in the Helpline section. I gain the double advantage of having less replies to write, and no more problems from Simon to worry about!

So if you are stuck, or can help "unstick" an Adventurer in distress, write to me at Keith Campbell's Adventure Helpline, *Computer & Video Games*, Durrant House, 8 Herbal Hill, London EC1R 5JB. I shall continue to receive and read all your letters, but will pass some of them over to Simon to answer.

A Happy Christmas to Adventurers everywhere. And if yours is a Christmas Pudding stuffed with treasures, don't forget to LOOK and EXAMINE things carefully, before you eat!

HELPFUL HINTS

Use the telescope in the observatory, the deaf-aid in the oil drum, and the megaphone in the echo chamber.
You'll receive a peom as a reward — could it hold a clue?
MOVE something heavy to lead to a new object, (a "paw" clue I'm afraid!) then drop it in the only place possible before trying to lift the curse.

NERVOUS BREAKDOWN?

Is Pimania causing brain damage? Paul Smith of Cheam, fell into a dead faint after offering to become a life subscriber to *C&VG* and the complete solution to Adventure B, just to find out how to open the gate. He's lucky because he's obviously playing on a Spectrum.

John Yeates, a self-confessed BEEB Pimaniac from St Clements in Jersey, says only "PI. AAAGH! SPLAT!" And well he might

Some early versions of Pimania contained a bug which makes the game impossible to solve. Only about fifty of these were sent out before Automata spotted the bug and contacted the people who had so far purchased the game. If you suspect you have a bugged copy contact Automata now who will be happy to replace the tape and refund your postage.

Meanwhile Chris Hunt offers some clues, and asks for help in getting past the foothills, into the sewers, and opening the sluices. Chris reports that he has taken note of the shape of the map, as suggested by Neil Duffin. It resembles a Giraffe, says Chris.

CONFESSIONS OF AN ADVENTURER

Following the scandalous July revelation of my defeat at the hands of *Mystery Fun House*, I am pleased to announce that I do not have to make a similar degrading admission about *Voodoo Castle*.

The object of this game is to lift the curse placed upon Count Cristo, and the player has to piece together clues on how to do this, whilst finding the necessary objects to enable him to peform a "grand finale" around the coffin.

There are problems with witches brew, some explosive chemicals, a chimney and a ju-ju bag to name but a few. And what is that raven doing outside the self-shutting window?

Great fun until you get stuck — and there are some very sticky places! The trouble is there are also some red-herrings to add to the bafflement factor.

Voodoo Castle, written by Scott's wife Alexis Adams, IS available for the Vic-20 (!), and has been the steady source of desperate letters for some months.

"I've done what it says" writes Andrew Bethell from Walsall, "and nothing happens. If I don't lift the curse soon I shall drink the witches brew and we all know what happens then, don't we?"

A good demonstration of how Alexis can be every bit as mean as Scott, for there is one deed to perform that is not mentioned in the clues you collect!

Shaun Chetwood from Telford and Margaret Booker from Chesterfield have both written about *Voodoo*. Margaret, playing the game with eight others since last Christmas, was especially desperate.

Her husband was refusing to let her buy another adventure until *Voodoo* was solved. I rushed her, and Shaun, a reply framed to help them re-start without giving the whole game away! I also suggested that Margaret might try *Adventureland*.

Back came two more letters. Mr Booker had bought *Adventureland* for Margaret (proving that a word to Helpline CAN be rewarding!), but both she and Shaun were still independently stuck in the same place! Both queried whether their Vic cartridges might be faulty or different from my TRS-80 version.

I began to wonder the same myself, until, having spelled things out in detail to Shaun, he soft-footed it back to the coffin, and was soon in clover! His last letter made moving reading!

Voodoo Castle is available for TRS-80, Video Genie, Vic-20, Apple, Atari and TI99/4a. The clues I passed on to Shaun and Margaret are available for all *C&VG* readers, upside down!

spine. For the mysterious inhabitants of the circus are doomed to languish in eternal captivity unless . . .

Not an easy game to complete, and ideas are needed to solve it. A point obviously not missed by the author, for if in frustration you use words best not printed here, the computer will reply "What a foul mouth you have!"

Every similar in presentation to a Scott Adams adventure, *Circus* can be recommended as Christmas fare to almost all Adventurers. *Circus* is available for a wide range of systems, including 48k Spectrum, BBC (A or B), TRS-80, Colour Genie, Atari 400/800, Commodore 64, Dragon 32, 16k ZX81 and Lynx. The suppliers vary from micro to micro, so would-be purchasers should scan the adverts.

And now I must get back to start that generator — time to turn on the Christmas tree lights!

DAN DIAMOND PRIVATE EYE

Whoever Faint-hearted Franklin is, he made certain he would be comfortable in his after-life. That is quite evident to anyone venturing into his tomb, an experience available to Dragon, Oric, and BBC owners.

The case file that comes with *Franklin's Tomb* takes up the story of Dan Diamond, American private Dick with a taste for Courage beer and jokes of a similar standard. But this had little to do with the Adventure that I, as Dan, was about to play.

I played the Dragon version, and thought the game started off in a rather mundane way, with a small puzzle to solve before getting access to the tomb proper.

The display was split rigidly into location description (top left), displayed inventory (top right), and conversation (bottom four rows). It looked rather stodgy, the response was slow, and I nearly didn't bother to continue playing.

A case of first impressions being misleading, because it soon became apparent that the response to location-changing commands was very prompt, abbreviations N,S,E, and W making moving around quite a slick procedure.

The response time varied considerably depending on the command, and averaged-out, was quite acceptable. Lack of cursor (my pet hate!) was partially compensated for by an obliging 'beep' when the computer was ready for more input.

Having entered the ornate doors leading down, I set about exploring the crypt.

Here was a large area for exploration. The network was easy to get around and interesting to tour. You could visit an Aquarium (permanently?), tour a gallery of murals, play a juke-box (got the coin?) and listen to Franklin and the All Stars, treat-yourself to a steam-bath and much much more.

Very entertaining stuff — but all the time you might wonder what the objective is, until and unless you have visited the right place. Once visited, the search is on in earnest, for you know what you need but not how to get it all!

"The best Adventure I have seen for ages!" commented Neil, my 15-year-old son. I was inclined to agree with him! Definitely an acceptable Christmas present for any friendly Dragon.

The game is written in Basic and unfortunately the BREAK key is not disabled. I say "unfortunatley", because if you accidentally hit BREAK the fixed display will be spoiled. To recover, simply type GOTO 350, and then drop an item you are carrying to relist your inventory. Don't list the program or believe me, your fun will be spoiled!

The cassette comes complete with an 18 page 'case file' which includes pictures of many of the text-described locations.

Franklin's Tomb is from Salamander Software of Brighton, and available for Dragon 32, 48k Oric, and BBC 'B' micros at £9.95 from a number of suppliers. A sequel is promised — I can't wait!

wildings

COMPUTER CENTRE
A Member of the SPECTRUM Group.

WIGAN 11 Mesnes Street, Wigan, Lancashire.13 WN1 1QP. Tel: Wigan (0942) 44382. Closed Wed.
BOLTON 23 Deansgate, Bolton, Gtr. Manchester BL1 1HH. Tel: (0204) 33512. Closed all day Wed.
PRESTON 49 Fishergate, Preston, Lancashire PR1 8BH. Tel: Preston (0772) 556250. Closed Thursday.
CHORLEY 68 Market Street, Chorley, Lancashire PR7 2SE. Tel: Chorley (02572) 74224. Closed Wed.
STOCKPORT 1 Little Underbank, Stockport, Cheshire. SK1 1LA. Tel: Stockport 061-480 3435. Closed Thurs.
WARRINGTON 111 Bridge Street, Warrington, Cheshire. WA1 2AR. Tel: Warr (0925) 38290. Closed Thurs.
All mail order enquiries to Wigan.

SPECTACULAR PRICE REDUCTIONS!



ATARI 400 inc. Basic
NOW £136.95

ATARI 800 48K inc. Basic
NOW £274.95

PLUS BRITAINS BEST PRICES ON THE REST OF THE EXCITING ATARI RANGE:

ATARI 400, BASIC, CASSETTE UNIT	£176.90
ATARI 400 48K INC. BASIC	£214.95
ATARI 400 48K, BASIC, CASS. UNIT	£264.95
ATARI 800 48K INC. BASIC, CASS. UNIT	£314.90
ATARI 410 RECORDER	£46.95
48K RAM FOR 400	£94.95
KEYBOARD FOR 400	£59.95
ATARI JOYSTICKS (Pair)	£13.95
ATARI 850 INTERFACE	£134.95
I/O CABLE	£12.99
PRINTER CABLE	£28.50
RS 232C CABLE	£25.00
MONITOR CABLE	£25.00
DERE ATARI (Book)	£19.95
QUICKSHOT JOYSTICK	£9.95

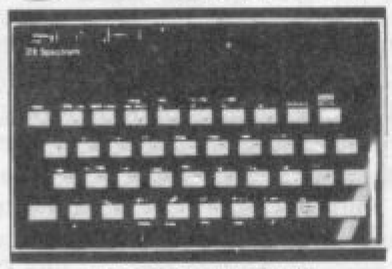
BBC

THE BIGGEST RANGE OF BBC MICRO COMPUTERS AND ACCESSORIES:

MODEL 'B' 32K	£399.00
MODEL 'B' 32K INC. DOS	£470.50
MODEL 'B' 32K INC. ECONET INT.	£447.50
MODEL 'B' 32K INC. DOS & ECONET INT.	£517.50
'A' TO 'B' UPGRADE (INC. FITTING)	£135.00
RAM UPGRADE (INC. FITTING)	£32.00
PACE 1 x 100K (100K)	£209.95
PACE 1 x 100K (100K)	£264.95
PACE 1 x 200K (200K)	£269.95
PACE 1 x 400K (400K)	£389.95
PACE 2 x 100K (200K)	£384.95
PACE 2 x 100K (200K)	£389.95
PACE 2 x 200K (400K)	£514.95
PACE 2 x 400K (800K)	£699.95
PACE 2 x 400K (800K)	£799.95
SANYO 12" MONO MONITOR	£74.95
MICROVITEC 14" COLOUR MONITOR	£287.50
SANYO 14" COLOUR MONITOR	£284.95
BBC CASSETTE LEAD	£3.95
BBC DOS KIT	£109.00
BBC PADDLES	£14.95
BBC PRINTER CABLE (Parallel)	£18.50
P.L. DIGITISER	£144.95
BBC CASSETTE RECORDER	£29.95

ORIC

ORIC 1 16K	NOT AVAILABLE
ORIC 1 48K	£139.95



ZX SPECTRUM
Special Wilding Scoop Prices!

16K NOW £94.95

48K NOW £124.95

OTHER SINCLAIR OFFERS:

ZX81 16K + RAM PACK & SOFTWARE	£44.95
ZX PRINTER	£39.95

TEXAS

T199/4A	£99.95
PERIPHERAL EXP. SYSTEM	£149.95
DISK CONTROLLER CARD	£169.95
DISK DRIVE	£399.95
RS 232 CARD	£129.95
RAM CARD (EXP. to 48K)	£139.95
JOYSTICKS	£24.95
CASSETTE LEAD	£5.95

DRAGON

DRAGON 32 INC. JOYSTICKS	£174.95
JOYSTICKS	£19.95
LIGHT PEN	£12.95

COMMODORE

VIC 20, CASS. S/WARE	£139.95
COMMODORE 64	£225.95
C2N CASSETTE	£39.00
VIC 1515 PRINTER	£209.95
VIC 1540 DISK DRIVE	£299.95
VIC JOYSTICK	£7.50

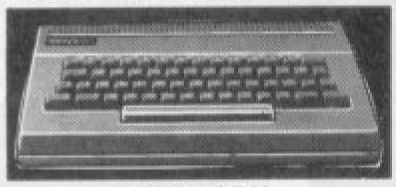
MONITORS

MICROVITEC 14" COLOUR	£287.95
SANYO 14" COLOUR	£284.95
SANYO 12" GREEN	£74.95

PRINTERS

EPSON RX80	£304.95
EPSON FX80	£469.95
EPSON MX100	£399.95
SEIKOSHA GP 100A	£229.95
SEIKOSHA GP 250X	£264.95
SHINWA CP80 FRICTION/TRACTOR	£279.95

COMPREHENSIVE SOFTWARE LISTS AVAILABLE. SEND LARGE S.A.E.



LYNX 48K
ANOTHER INCREDIBLE WILDING SCOOP ON THIS POWERFUL HOME COMPUTER!
NOW £199.95
AND THE **NEW** LYNX 96K
● MORE POWER ● MORE FEATURES
NOW £299.00

ELECTRON
£199.95
PHONE FOR AVAILABILITY



COLOUR GENIE 16K
NOW £139.95

16K RAM CARD	£36.95
JOYSTICKS & KEYBOARD	£49.95
LIGHT PEN	£16.95

SHARP MZ 80A
NEW LOW PRICE £399.95
INC. £75 OF SOFTWARE

SHARP PC1251	£79.95
SHARP CE125 PRINTER & CASS. FOR PC1251	£99.95

SPECTACULAR RANGE OF SOFTWARE

BBC

ACORNSOFT

*Castle of Riddles	£9.95
*Monsters	£9.95
*Snapper	£9.95
Arcade Action	£11.95
*Meteors	£9.95
*Arcadians	£9.95

BUG BYTE

*Galaxy Wars	£7.50
*City Defence	£7.50
*Music Synthesiser	£9.50
*Space Invaders	£7.50

A & F

*Frogger	£8.00

D.A.C.C.

*747 Flight	£9.95

MICRO POWER

*Killer Gorilla	£7.95
*Croaker	£7.95
*Chess	£7.95
*Laser Command	£7.95

*Model B Only

ATARI

Miner 2049 ER (ROM)	£29.95
Preppie	£21.95
Preppie II	£24.95
Choplifter (ROM)	£29.95
Zaxxon	£27.95
Baja Buggies	£21.95
Airstrike	£14.95
Claim Jumper	£24.95
Aztec Challenge	£12.95
The E-Factor	£11.95
Spider Invasion	£11.95
Meltdown	£11.95
Up Up and Away	£14.95
Necromancer (32K)	£24.95
Gorf (ROM)	£29.95
Mountain King (ROM)	£29.95

ALL ATARI PROGRAMS ARE ON 16K CASSETTE UNLESS STATED OTHERWISE. MANY AVAILABLE ON DISK – PLEASE RING FOR PRICES.

SPECTRUM

BUG-BYTE

Spectres	£8.00
Spectral Invaders	£5.00

IMAGINE

Arcadia	£5.50
Schizoids	£5.50
Ah Diddums	£5.50

DK-TRONICS

3D Tanx	£4.95
Centipede	£4.95
Meteoroids	£4.95
Dictator (48K only)	£4.95
3D Spawn of Evil	£4.95

ULTIMATE

Jet Pak	£5.50
Pssst	£5.50
Cookie	£5.50
Trans-Am	£5.50

QUICKSILVA

Mined Out	£7.95
Timegate	£8.95
Meteor Storm	£7.95
Astro Blaster	£7.95

HEWSON

Heathrow A.T.C.	£7.95

DRAGON 32

Comsic Zap	£7.95
Cuthbert Goes Walkabout	£7.95
Defense	£7.95
Dragon Invaders	£7.95
Frogger	£7.95
Galactic Ambush	£7.95
Golf	£7.95
Katerpillar Attack	£7.95
Morocco Grand Prix	£7.95
Phantom Slayer	£7.95
Scarfman	£7.95
Shuttle	£7.95
The King	£7.95
Talking Android Attack	£7.95
Telewriter	£49.95
Escape	£7.95
Racer Ball	£7.95
747 Flight	£9.95

VIC 20

SUMLOCK

Skramble	£7.95
Jumpin' Jack	£7.95
Triad	£7.95
Astro Fighters	£6.95
Chopper	£6.95
Grid Trap	£7.95
Space Rescue	£6.95
Puzzle Pack	£6.95
Scorpion	£7.95
Starship Escape (16K)	£9.95

IMAGINE

Arcadia	£5.50
Wacky Waiters	£5.50
Catcha Snatcha	£5.50

RABBIT

Space Phreaks	£4.95
Annihilator	£4.95
Krell	£4.95
Space Storm	£4.95
Skramble	£4.95
Quackers	£4.95
Galactic Crossfire	£4.95
Orbis	£4.95
Alien Soccer	£4.95
Hopper	£4.95

MICRO-GEN

Puckman	£6.00

COMMODORE 64

RABBIT

Escape MCP	£9.95
Grave Robbers	£9.95
Cyclons	£9.95
Centropods	£9.95
Pakacuda	£9.95

INTERCEPTER

Crazy Kong	£7.00
Frogger	£7.00
Panic 64	£7.00

TERMINAL

Super Skramble	£9.95

LARGE SELECTION OF BOOKS!

IMPORTANT NOTICE

We are not a 'Cash and Carry' operation. We demonstrate equipment and give first class service. We offer instant credit facilities to callers who have a current cheque or credit card and we take Visa, Access, Creditcharge and Spectrum cards without surcharge. All mail order to Wigan please, credit card holders simply phone your card number for prompt despatch.

ALL PRICES INCLUDE VAT

Prices correct at time of going to press but subject to change without notice. E & O E

All Mail Order enquiries to Wigan

WILDINGS MAIL ORDER SERVICE

If you don't have a Wilding shop near you – order by post. We have one of the best Mail Order Services in the country, backed by years of experience.

Please rush me .... I enclose Cheque/P.O. for ....

or Access .... Barclay Card No. ....

Name ....

Address ....

....

POSTAL CHARGES: Computers/Printers etc.
Postage charged at 1% of order (A minimum of £2)
Software 1 Program 50p, 2 Programs 75p, 3 or more no postage.

C.V.G/12

ARCADE *Looks At* THE SHAPE OF GAMES TO COME

LASER GAMES

New realms of action and adventure will be opened up by the arrival of laser-disc games in your local arcade.

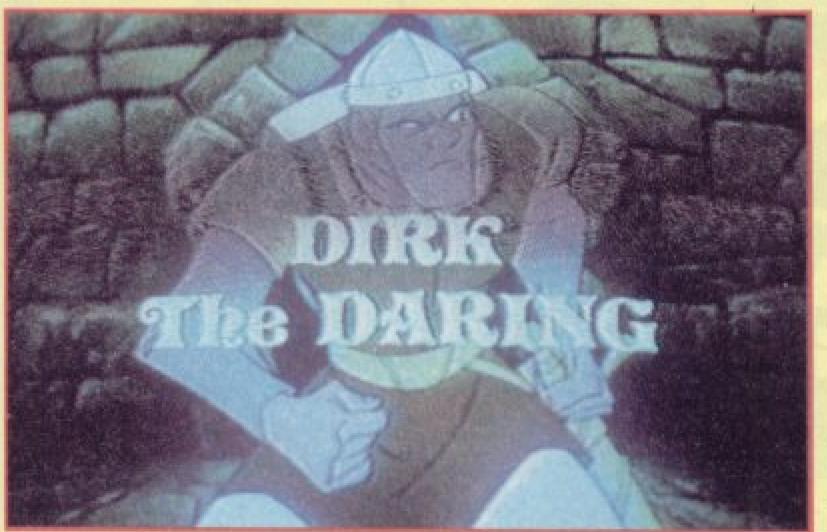
Gone are the days of one-dimensional computer video graphics. Now you can play space games against a backdrop of real stars or blast around a real race track while sitting safely in the confines of an arcade machine.

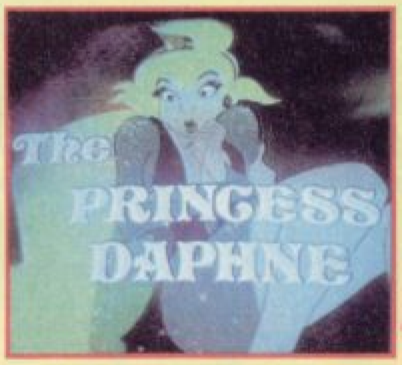
Laser games will revolutionise the flagging arcade industry if reactions to the several machines on show at a recent preview of what's new for '84 are anything to go by.

We've already mentioned laser games in these pages — but now we can also bring you pictures of what you can expect to see. You'll be amazed — believe us!

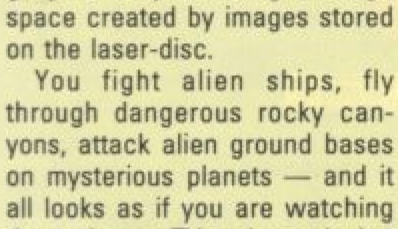
It all began with Seag's Astron Belt — already in action in some arcades around the country. It puts you in control of a video-graphic ship blasting through space created by images stored on the laser-disc.

You fight alien ships, fly through dangerous rocky canyons, attack alien ground bases on mysterious planets — and it all looks as if you are watching the action on TV and not playing an arcade game at all! Astron Belt also has another added-extra — the Vibra-Seat! If you blast an alien ship out of the sky









the seat shakes just as if you were caught up in the backwash of the explosion. Quite an experience!

Following a similar space theme is Inter-Stellar from Funai. This takes you across strange alien deserts on lost planets and pits you against fleets of alien craft. Inter-Stellar uses more computer-style graphics than Astron Belt and is therefore not quite so stunning as its predecessor — but is still a good game nonetheless.

Moving back to earth Taito have entered the laser-disc race with a Grand Prix racing game called Laser Grand Prix.

A video car is superimposed on film of the Japanese Mount Fuji international race track.

You race against other video cars in an extremely realistic simulation of a formula one race. The roar of the engine and squeal of tortured tyres as you attempt to take the bends at top speed all add to the illusion.

The games' opening demo is pretty neat too — with the video car being transformed into a real race car as it streaks over the start line.

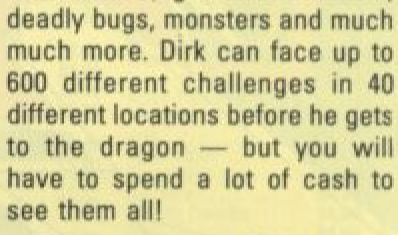
Laser Grand Prix also features bonus screens for winners — like the Spark Race, a night driving challenge and the Fantastic Race, a trip into the realms of fantasy still in the seat of a race car. The game comes in a large car cockpit type cabinet — so you won't miss it if one arrives in your local arcade!

However, the undoubted star turn of laser games at the moment has got to be Dragon's Lair — a fully animated sword and sorcery adventure with a touch of Tom and Jerry thrown in for good measure.

Dragon's Lair is the story of Dirk the Daring, a brave knight who faces many trials and tribulations in his quest to rescue a beautiful maiden from the clutches of a fire-breathing Dragon.

You control the actions of Dirk the Daring and attempt to keep him alive in his struggles against evil wizards, giant black riders, deadly bugs, monsters and much much more. Dirk can face up to 600 different challenges in 40 different locations before he gets to the dragon — but you will have to spend a lot of cash to see them all!

The controls are fairly simple — a joystick moves Dirk backwards and fordwards while "action" and "sword" buttons control those aspects of the game.



You have to use the controls at precisely the right moment — or Kirk will die an agonising — but often amusing — death.

And all this action is presented in cartoon style visuals. It's just as if you were watching a Disney cartoon adventure on TV — except that you are in control of what happens next.

WHAT'S NEW DO-BE-DO-BE-DO!

MR DO'S CASTLE

Mr Do! was tremendously popular in arcades and now has a follow-up. Mr Do's Castle is the continuation of his adventures.

Mr Do has to exterminate unicorns invading his castle. He does this by dropping a block with a hammer which knocks unicorns into a hole, or more simply by dropping a block on top of the beasts.

Mr Do can gain extra power from blocks marked with a death's head. This exterminates several unicorns at one attempt. Otherwise Mr Do has to avoid the pursuing unicorns by pulling up ladders behind him as he moves around the screen.

Bonuses are provided by dropping three blocks marked with keys which brings a shield into the highest window of the castle. If Mr Do can wipe out the shield the unicorns change into "EXTRA" and by wiping out the "EXTRA" with a hammer or by dropping on it, a flag runs up a pole. Run up five flags and another Mr Do appears.

At this stage of the game — continually more challenging — the final unicorn changes into several blue unicorns which are faster and more ferocious and if Mr Do survives them for 30 seconds they change into double unicorns and it takes a very skilled player indeed to survive their attack.

Photographs by Max Bradley

Lasers ACTION





As you've probably guessed by now it's very hard to do Dragon's Lair justice by simply writing about it. It's definitely a game that has to be seen to be believed! That's where our pictures will help.

Dragon's Lair comes from Starcom, a division of Advanced Microcomputer Systems, the video game company whose Space Wars machine set the scene for the sci-fi arcade game boom in the late 1970s.

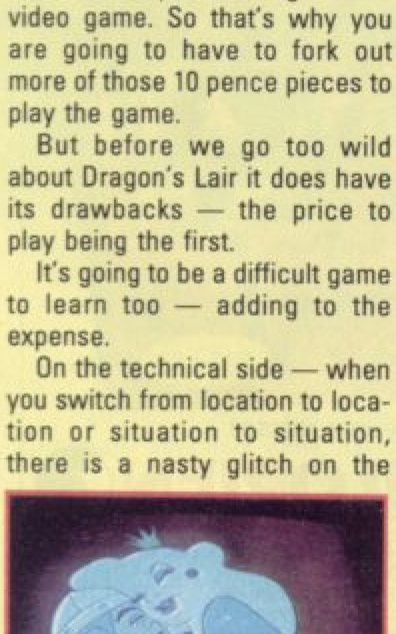
The company who created the amazing animation for Dragon's Lair strangely wish to remain anonymous — but American sources say that it is the work of Don Bluth who was behind the animated feature film *The Secret of Nimh*.

One and a half million dollars was spent on software alone for Dragon's Lair — $250,000 is the usual development budget for a video game. So that's why you are going to have to fork out more of those 10 pence pieces to play the game.

But before we go too wild about Dragon's Lair it does have its drawbacks — the price to play being the first.

It's going to be a difficult game to learn too — adding to the expense.

On the technical side — when you switch from location to location or situation to situation, there is a nasty glitch on the



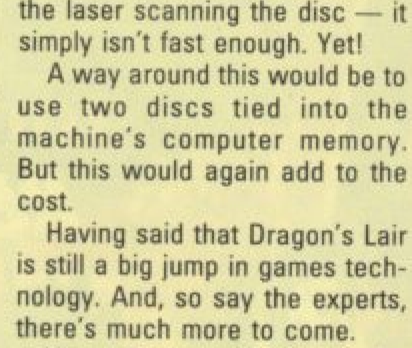


screen, just like when you change channels on your TV. This is caused by the speed of the laser scanning the disc — it simply isn't fast enough. Yet!

A way around this would be to use two discs tied into the machine's computer memory. But this would again add to the cost.

Having said that Dragon's Lair is still a big jump in games technology. And, so say the experts, there's much more to come.

Victor Penman, the man who watched over the creation of Dragon's Lair reckons that the next generation of games will



involve other senses — smell, touch and possibly taste to enhance realism of the games. We'll just have to wait and see!

A new Dragon's Lair style game is due in the Spring.

Another sword and sorcery theme laser game is called Eon and the Time Tunnel in which the player travels through a movie landscape of dark mysterious castles and alien cities. We at *C&VG* haven't managed to see this one yet — but you'll be the first to hear about it when we do.

Rumours have been filtering through from the States about film crews lurking secretly in the Grand Canyon and a science fiction special effects company working on a special 3D process for forthcoming laser games.

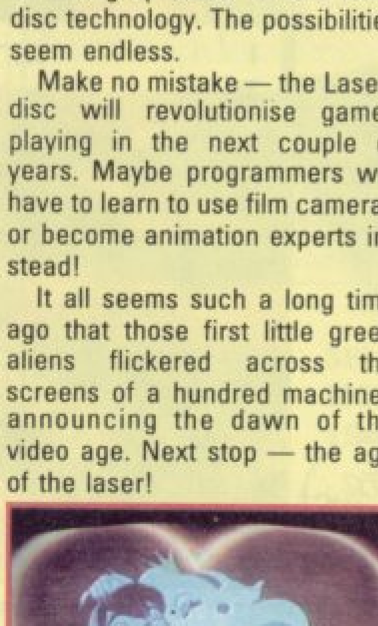
It's only a matter of time before this laser technology makes a switch to the home micro market. It could be that arcade machine manufacturers will be selling their laser discs — or adaptations of them — to run with popular home computers fitted with a special interface.

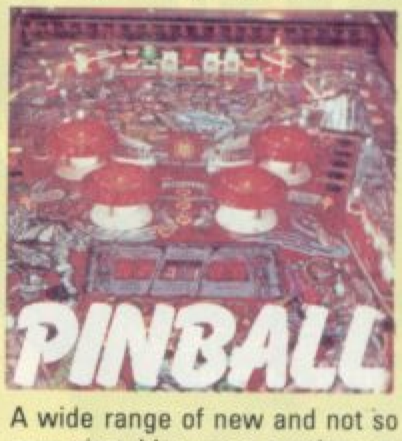
You might even be able to get an arcade style cabinet for your home — and change games by simply switching the laser disc!

And then there's the possibility of linking up cable TV and laser disc technology. The possibilities seem endless.

Make no mistake — the Laserdisc will revolutionise games playing in the next couple of years. Maybe programmers will have to learn to use film cameras or become animation experts instead!

It all seems such a long time ago that those first little green aliens flickered across the screens of a hundred machines announcing the dawn of the video age. Next stop — the age of the laser!





A wide range of new and not so new pin-tables went on show at the recent Preview 84 arcade show held in London.

For me, the star of the show was Ballys Centaur II — the latest in the long line of remakes. It seems only yesterday that the original hit the arcades.

This pin has all the attraction of the original — the striking black and white playfield, many special features and the growling Centaur voice. In fact it's difficult to see what — if anything — has changed, apart from a smaller backsplash and a rearranged digital score readout. It still retains all its old addictiveness and playability.

Also from Bally comes Gold Ball — is this a remake of Silver Ball? This is a fairly basic pin with some nice features. But I didn't get to play it long enough to see if that fabled "gold" ball makes an appearance — like a "silver" one did in that first pin.

Award for the worse looking pin-table of all time must go to Zaccaria. This awful creation was covered in flower-power style artwork and was called something like Love. I could be wrong, it was difficult to work out the name from among the multicoloured floral patterns.

Those dreadful patterns repeated themselves on the split-level playfield. Each pot-bumper even had a dainty little flower painted on top of it! As to playability — if you can put up with the assault on your eyes — you might be able to enjoy an adequate game. It speaks to you too — but I couldn't quite make out what it was trying to say.

Next issue we hope to bring you news from the Pinball Owners' Association convention, where among other events, the new Pinball Wizard will be chosen from among the ranks of pinball aces who belong to the association.

LOTHLORIEN

WARMASTER SERIES

THE WINNING NAME IN WAR GAMES

3 NEW STRATEGY GAMES FROM THE FAMOUS WARMASTER SERIES

Johnny Reb (1861)

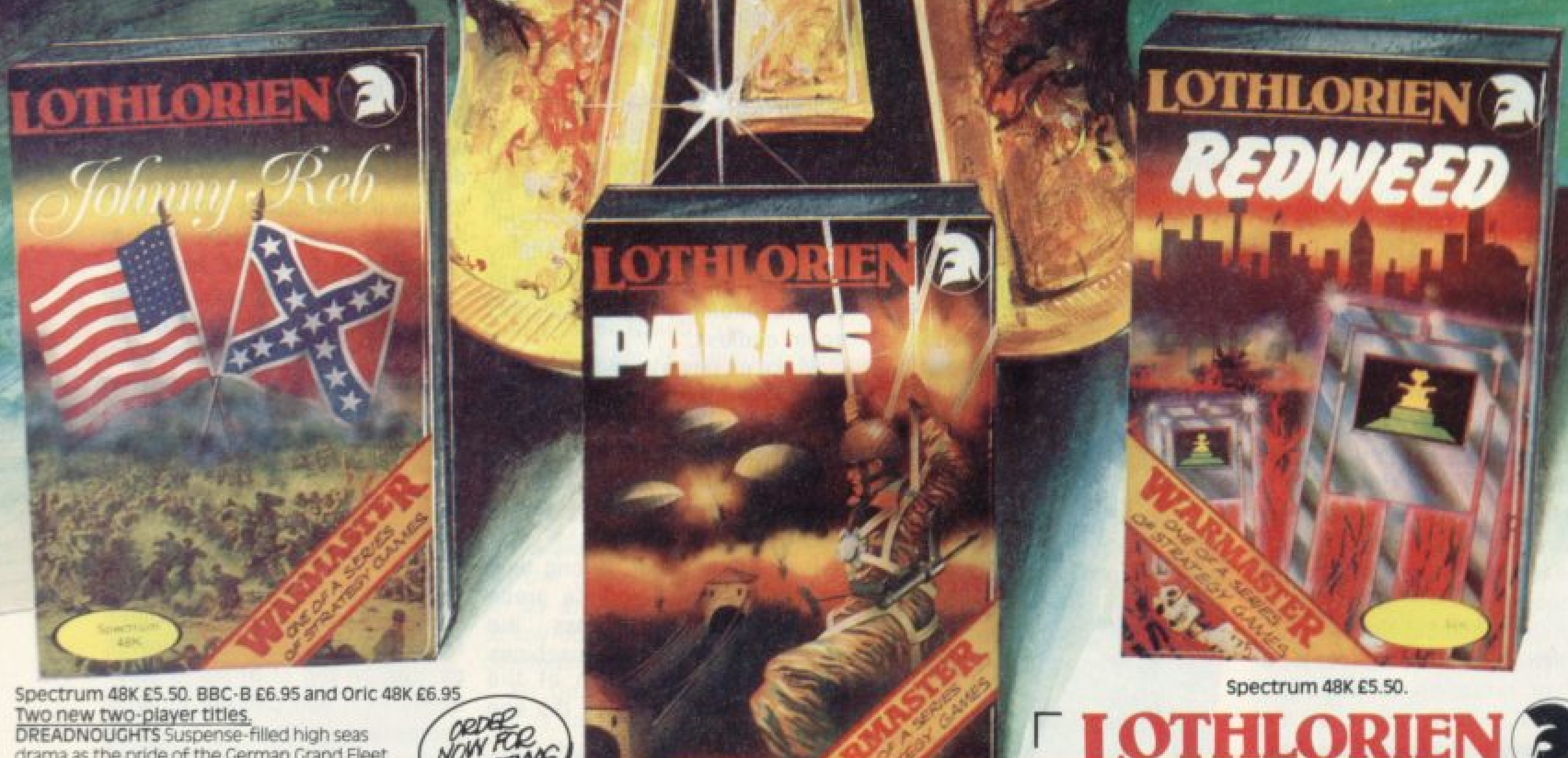
There's still plenty of fight left in the Confederate South as each side selects forces to manoeuvre on a full-graphics battle field. Use the 'save game' facility to perfect your tactics and re-write American History. 1 or 2 players.

PARAS (1944)

Dramatic all-graphics reconstruction of a famous World War II Campaign. Your hand-picked force has dropped behind enemy lines to capture a strategic river crossing. 2 versions of the game with ten levels of play.

REDWEED (1995)

The Martians are coming in this superb all-graphics battle. You're in command of land forces defending London when an outbreak of semi-sentient Redweed threatens to immobilize your forces. Fifteen levels of play.



Spectrum 48K £5.50. BBC-B £6.95 and Oric 48K £6.95

BBC-B £6.95 New-Spectrum 48K £5.95.

Spectrum 48K £5.50.

ORDER NOW FOR CHRISTMAS

Two new two-player titles.

DREADNOUGHTS Suspense-filled high seas drama as the pride of the German Grand Fleet is locked in battle with the Royal Navy. Secret orders, battle graphics, torpedoes, guns etc.

CONFRONTATION Build-on battle game gives a basic format for any modern, non-nuclear conflict. Master tape contains modern European scenario and you can create others of your choice using both air and land forces.

More superb strategy games.

WARMASTER TITLES	
Warlord	48K Spectrum/Dragon 32 Tandy Color 32K/ZX 81 16K
Roman Empire	16K Spectrum/BBC-B/Dragon 32 Tandy Color 32K/ZX 81 16K Atari 400/800 48K
Peloponnesian War	ZX 81 16K
Battlezone 2000	BBC-B

NEW RED BARON—great tactical WW1 aerial combat game.

OTHER GAMES	
Tyrant of Athens	16K Spectrum/Dragon 32/Tandy Color 32K/ZX 81 16K
Samurai Warrior	16K Spectrum/Dragon 32/ZX 81 16K
Privateer	48K Spectrum/ZX 81 16K combined cassette £4.50

Prices: ZX81 **£4.50** Spectrum **£5.50** (except Paras) **£5.95** Dragon 32/BBC-B **£6.95** Tandy **£7.95** Atari **£12.50**

Lothlorien games are available from most leading software specialists or direct by post at no extra cost. Why not really put your computer through its paces today?

LOTHLORIEN

the mind stretcher

DREADNOUGHTS	Spectrum 48K	£5.95	☐
CONFRONTATION	Spectrum 48K	£7.95	☐
RED BARON	Spectrum 48K	£5.95	☐
REDWEED	Spectrum 48K	£5.50	☐
PARAS	Spectrum 48K	£5.95	☐
	BBC-B	£6.95	☐
JOHNNY REB	Spectrum 48K	£5.50	☐
	BBC-B	£6.95	☐
	Oric 48K	£6.95	☐

Others (please specify) ________

I enclose a cheque/PO for £____ made payable to M. C. Lothlorien

Please debit my Access A/C No.____ /____ /____ /____

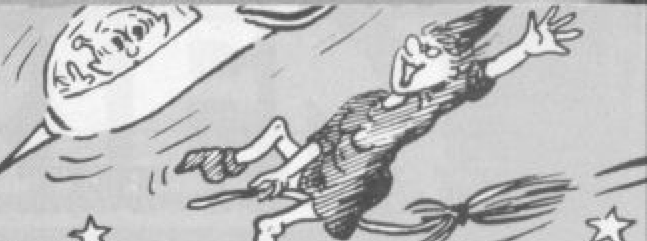
SIGNED ________

ADDRESS ________

Send to: M C Lothlorien, Dept. CVC/12/83, 56a Park Lane, Poynton, Cheshire SK12 1AE. Telephone: Poynton 876642.

Once upon a time if you wanted to write a good game then you needed to be a good programmer. But not any more. Programs are appearing which allow you to create games without knowing anything about the computer. Robert Schifreen tested the two latest offerings.

GAMES without TEARS



If you've always fancied yourself as a designer of video games but don't think you are skilled enough to program your own games, then this new software innovation might interest you.

Called *The Games Designer,* this program allows you to design your own video games — even if you know nothing at all about programming! The games are all in machine code and, says the maker, will be as good, if not better than most of the commercial software currently available for the machine.

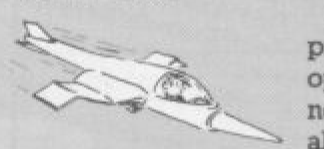
If all this sounds too good to be true, then you should realise that there are some limitations to the system. Firstly, you cannot design your own *unique* game from scratch. You are only allowed variations on the theme of Invaders, Asteroids, Scramble and Berserk.

Once the tape has loaded, you are presented with a menu of options. At this point, there are 8 separate games stored in the system and you can select any one of them. The games are not stand-alone programs but are banks of data which need the actual designer program to run. A game can be saved and loaded once written.

You can either alter one of the 8 demo games supplied, or create your own. The only limitation here is that it can only be one of the 4 main types mentioned above.

The first option in the menu is to play a game. This plays the current game and uses the cursor keys for movement. The zero key is used to fire. To change the current game to another of the eight, you choose option two.

Taking option 3 puts you in to the sprite editor.



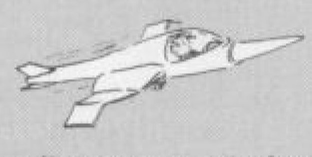
Sprites are 12 pixels square as opposed to the normal 8 available in Basic. These are the characters which will appear in your game including all the aliens, ships, missiles and the like. If you want animation, like a space invader which constantly blinks, you can define two different sprites and the program will constantly flick between the two during play..

The menu option which has the most dramatic effect on a game is the configuration section.

Selecting this option takes you to yet another menu which allows various characteristics of the game to be set.

Most important is the game format which is a number between 1 and 4 corresponding to the four types of game. Adding 4 to any of these values makes the game joystick compatible. You can also set the background and foreground colours here.

There is also a special effects section which does wonderful things like



scattering random stars over the playing area. You can also specify whether aliens appear singly or in groups. You can provide a shield for the laser base if you wish.

Next come the sound effects. Entering this option lets you alter the sounds by means of 4 sliding controls displayed on the screen.

There is a reasonable simulation of a definable envelope command here, and the sounds available are quite good.

There are 4 different options, with different noises producable for missile sound, bomb sound and explosions of ship and alien.

The attack wave command allows control of movement on the screen. Here you can set up your attack waves, and specify which sprites will be used to form them.

The actual movement is controlled by another menu option. There are a number of different movement paths which you can define and then link them to each other creating long chains.

Whilst setting up the attack waves, you are also given control over such matters as how many points will be awarded for destroying certain aliens and also the maximum number of aliens in an attack wave.

Once you have created your masterpiece you can save it to cassette. The system used differs from The Quill in that the cassette is not a self contained game. It is simply a data file which needs to be loaded along with the designer itself.

Although this package is sold as a games designer, there is a limit to the originality of the games which can be produced. You are always limited to variations on a theme, although it should be said that these variations can be quite divorced from the original.

However, you can produce smooth, fast machine code games with little effort — and you get 8 demo games as well. Games Designer comes from Quicksilva at £14.95 and runs on a 48k Spectrum.

If you've ever tried your hand at writing an Adventure program then you'll know just how long and complicated a job it can be.

But that's been made a lot easier with The Quill, a program for the Spectrum which allows you to design your own adventure games. You can now put all your effort into creating the scenes and pitfalls, and leave The Quill to do the programming for you.

The best way to test such a program is to use it to create a simple Adventure, so that's what I did.

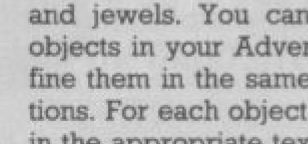
Firstly I designed the game by drawing a map showing all the locations and how they were connected.

There were just four locations in my example, although in reality you aren't limited to any size. The program itself takes around 8k, so the database for the game can be massive if you have the time to design it.

Once you have your map designed, you then have to tell the interpreter about the locations. You type in the text which is associated with that particular location.

The entire program is menu driven. There's a main menu with around 20 options such as alter vocabulary, select movement table etc., and you can alter any part of your game at will. Within each of these choices there's a small sub-menu with 2 or 3 choices.

Once you have defined the locations



you have to tell the program how they are interconnected.

For each location, you need to specify all possible routes from it, and the number of the location which taking that route will lead you to.

No adventure is complete without a number of objects like keys, torches and jewels. You can have up to 255 objects in your Adventure and you define them in the same way as the locations. For each object number you type in the appropriate text.

Once you've specified your objects you can place them at their starting positions in the game. Again you use the location numbers to specify positions.

There are also a few special object

Illustration: Caron Creed



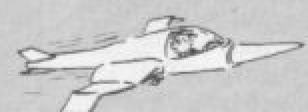


numbers, for example 254, which implies that the object is currently being carried by the Adventurer.

The most important part of an Adventure is the range of words which the computer can understand. The program may not understand TURN ON THE LIGHT, but may be totally familiar with a command to LIGHT LAMP.

The heart of the Adventure is called the event table. It is this which links the actions which the program takes, to the commands which the player types in.

All the normal commands associated with Adventures are available, like Inventory, Describe and Quit. A player can also save the current game to tape and continue his quest at a later date. This is distinct from saving the completed adventure to tape which can be done not by the player but by the person creating the game with The Quill.



Because certain actions are dependent on other conditions being satisfied, The Quill provides a number of flags which the program can set. For example, if a player picks up a key the program may set flag five to a value of one. Then, if the player tries to open the door the program will look at the value of flag five to see if the player has the key. If he or she does, then the door will be opened. If not, then the Adventure will say something like "you cannot open the door without the key".

Additional commands also exist such as BEEP, which enables you to add limited sound effects to the game. No doubt most people getting killed by a dragon will do so to the accompaniment of the Death March.

At any time you can test your Adventure and alter any part of it.

Using The Quill lets a computer user create a playable Adventure game. It will take quite some time to produce a good game, and a clear map is essential. Nevertheless, you do not need to know anything about programming. In fact, using The Quill will teach a novice something about writing programs as he works through the simple language which the Adventure interpreter understands.

This software is very professionally produced. It comes with a 52 page manual which takes you step by step through the creation of a simple Adventure.

Obviously if someone creates an Adventure he will wish to save it. You can do this with The Quill and it will save both the Adventure and a short Basic loader program. This means that the tape produced will auto-run and appear no different from a commercially produced program.

Gilsoft, creators of The Quill, are quite happy to let people sell their creations to others. They do not demand royalties as Softek do on their compiler. There is simply a message in the manual saying that "if you intend to sell an Adventure written with The Quill we would be grateful if you could mention somewhere in it that it was written with The Quill". Now that's the way to handle such matters, isn't it.

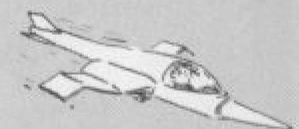
The Quill is made by Gilsoft which is based in Barry, South Glamorgan. You can buy a copy from selected computer outlets or direct from Gilsoft by mail or phone 0446 736369. If you're an adventure fan then you'll find it worth every penny of the £14.95 price tag.

Melbourne House have a similar program on offer for Spectrum owners.

It's called the high resolution user friendly real time games designer, or HURG for short!

Unfortunately there's only one copy of the program in the world at the moment, and that's in Australia. However, *Computer and Video Games* has discovered information about the program and it sounds very similar to the Quicksilva offering.

Again it is driven by a series of question and answer routines. It has the facility for creating various graphics characters and these can be animated. You can also speed up the game or make the aliens more vicious.



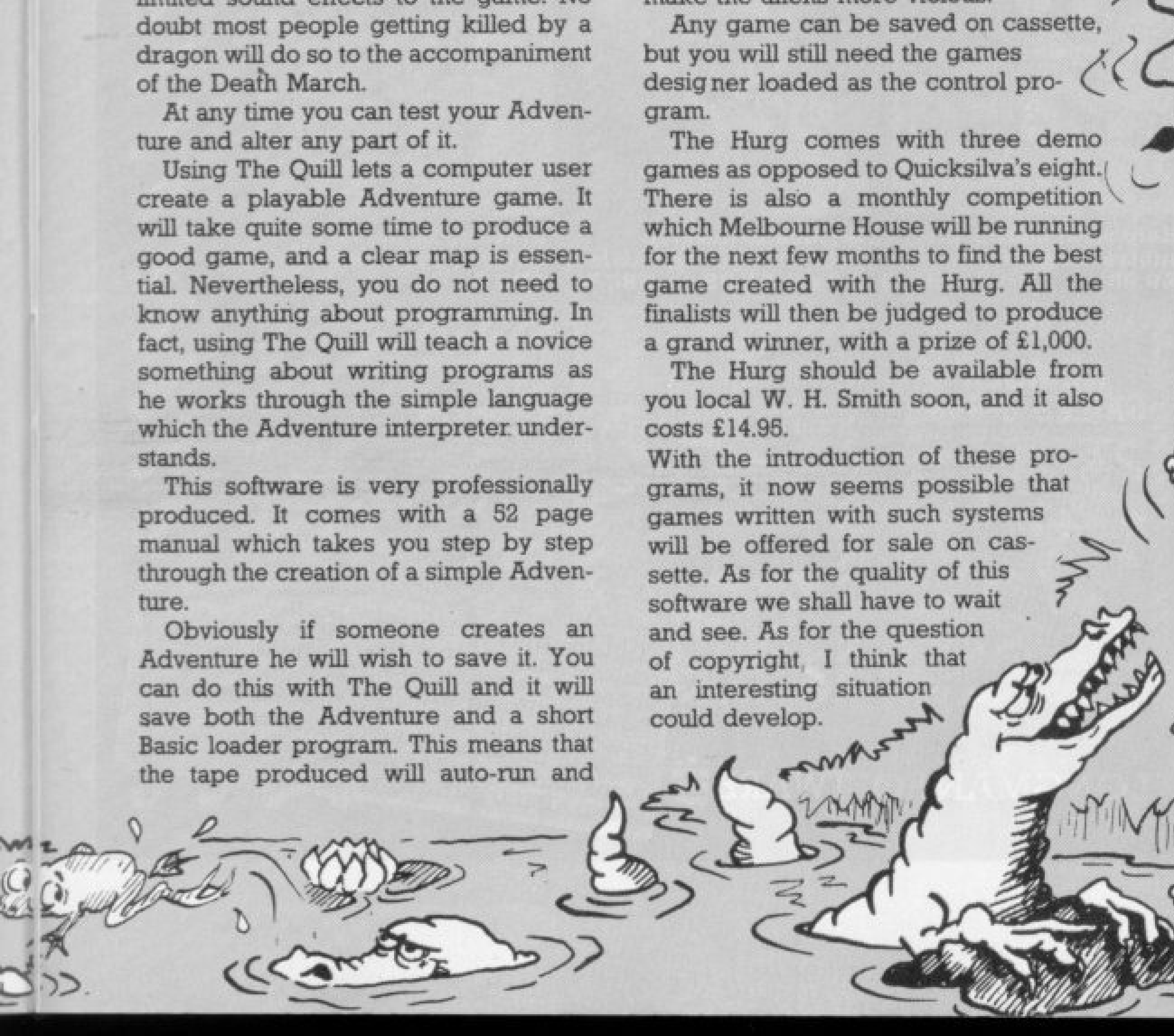
Any game can be saved on cassette, but you will still need the games designer loaded as the control program.

The Hurg comes with three demo games as opposed to Quicksilva's eight. There is also a monthly competition which Melbourne House will be running for the next few months to find the best game created with the Hurg. All the finalists will then be judged to produce a grand winner, with a prize of £1,000.

The Hurg should be available from you local W. H. Smith soon, and it also costs £14.95.

With the introduction of these programs, it now seems possible that games written with such systems will be offered for sale on cassette. As for the quality of this software we shall have to wait and see. As for the question of copyright, I think that an interesting situation could develop.





NEXT MONTH IN COMPUTER & VIDEO GAMES

BOOK OF ADVENTURE

Stand by for Adventure! It's coming you way in our next issue. We've gathered together our team of Adventure experts to bring you a very special supplement dealing with all aspects of this fast growing field of games playing. Read on for details . . .

EXCLUSIVE ADAMS!

Within the fun packed pages of our Book of Adventure we've got an exclusive interview with Scott Adams — the man who has baffled more Adventurers than he's had hot dinners. There will be lots of reviews, news and features on all aspects of Adventure gaming, plus a look at Adventure on video-games systems — and it's all put together by *C&VG's* ace Adventurer Keith Campbell.

MICRONET MISSION

Can you write good games programs? Do you want to win a Micronet Modem plus a years subscription to the Micronet 8000 system — a window on a whole new world? Well, rush out to your newsagents on December 16th and enter our great Micronet programming contest. Full details next issue.

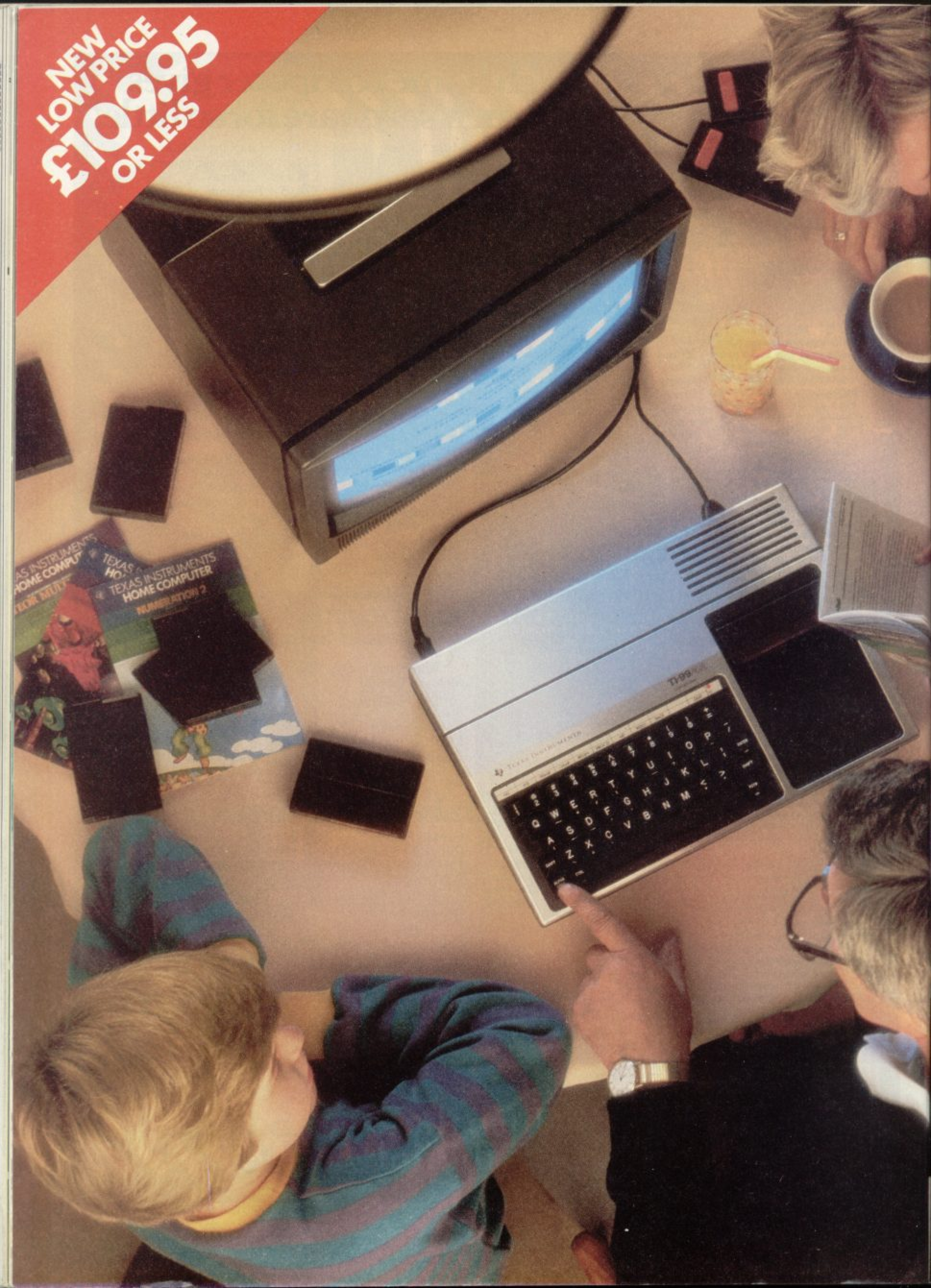
COLECO CONTEST

Last issue we promised you some ADAM family computer systems. Coleco are at this very moment rushing the Adams across the Atlantic — but in the meantime we've managed to get hold of three ColecoVision video-games systems plus Turbo Drive add-ons as prizes in our Name the Game contest.

FINALLY . . .

We've got games listings galore for the Spectrum, BBC, Atari, Dragon, Texas, Vic-20 and the Sharp.

On Sale December 16th


NEW
LOW PRICE
£109.95
OR LESS
TEXAS INSTRUMENTS
HOME COMPUTER
NUMERATION 2



The unbeatable TI Home Computer. It's all the computers your family will ever need.

Buying a home computer is something you have to get right first time. It's too late when you've got one to find it won't take plug-in software. Or can't be programmed without an expensive accessory.

The TI Home Computer is a real computer system

The TI Home Computer has got the memory power you might expect from more expensive computers, built in. At its heart is a powerful TMS 9900 16-BIT Microprocessor. Most other home computers have only an 8-BIT. And you can expand the memory from 16K of RAM up to 52K.

The total memory capacity is 114K Bytes.

A wide range of software for everyone

Another feature that makes the TI system so powerful, yet so easy to use is Solid State Software.™ These plug-in cartridges cover everything from space games like Parsec™ to teaching maths, managing home finances and composing music. And the range is getting wider all the time.

It even has what professionals look for in a home computer

CPU: TMS 9900 16-BIT, plus 256-byte Scratchpad RAM.
Memory: Total 114K bytes; 26K bytes ROM internal; up to 36K ROM cartridges external; 16K built-in RAM expandable to 52K bytes.
Keyboard: 48 Key QWERTY, alpha lock, function key auto repeat.
Sound: 5 octaves, 3 simultaneous tones, noise tone.
Colour: 16 foreground and background. High resolution.
Interfaces: Cassette, TV, 2 joysticks, main peripheral port.

™ trademark of Texas Instruments.

More than one programming language

The standard programming language, TI BASIC, is built into your TI Home Computer so you can begin programming right away. But there's an expanded range of optional languages like Extended BASIC, TI Logo, USCD-Pascal, TI FORTH and Assembler.

With these you can fully expand your programming skills.

A wide range of peripherals

Most computers lose a lot of memory when you add peripherals. The TI Home Computer is different. Every peripheral comes with its own built-in programs to keep the loss of memory to a minimum.

The convenient Peripheral Expansion System houses up to eight peripherals. Additional hardware cards simply plug in. You can even add a complete Floppy Disk Memory System.

The peripherals include memory expansion, RS232 Interface, P-Code card and more. There's also a sophisticated matrix printer and Solid State Speech™ synthesizer – which you can use with your own TI BASIC programs.

A lot more for no more

The TI Home Computer gives you so much more without costing more. At today's price it's exceptional value. Take your family round to try one. If you never try it you'll never know what you're missing.

TEXAS INSTRUMENTS

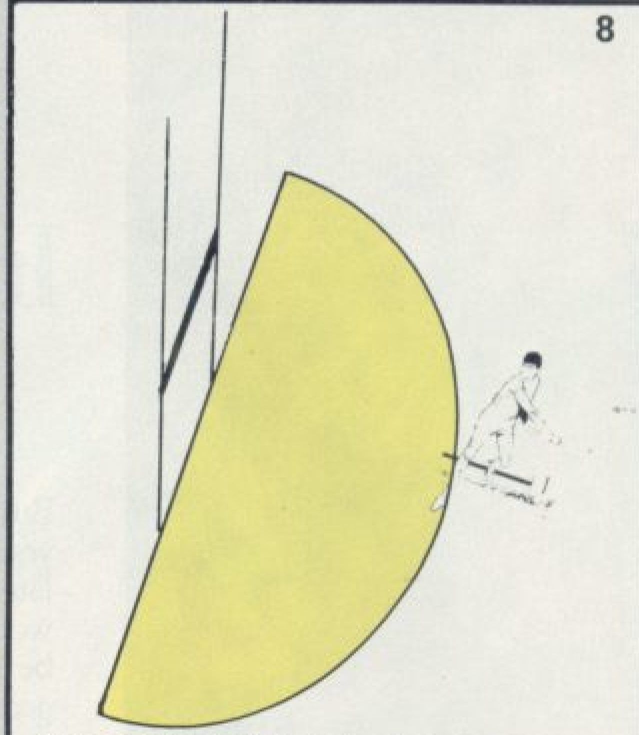
Creating useful products and services for you.

COMPETITION COMPETITION COMPET

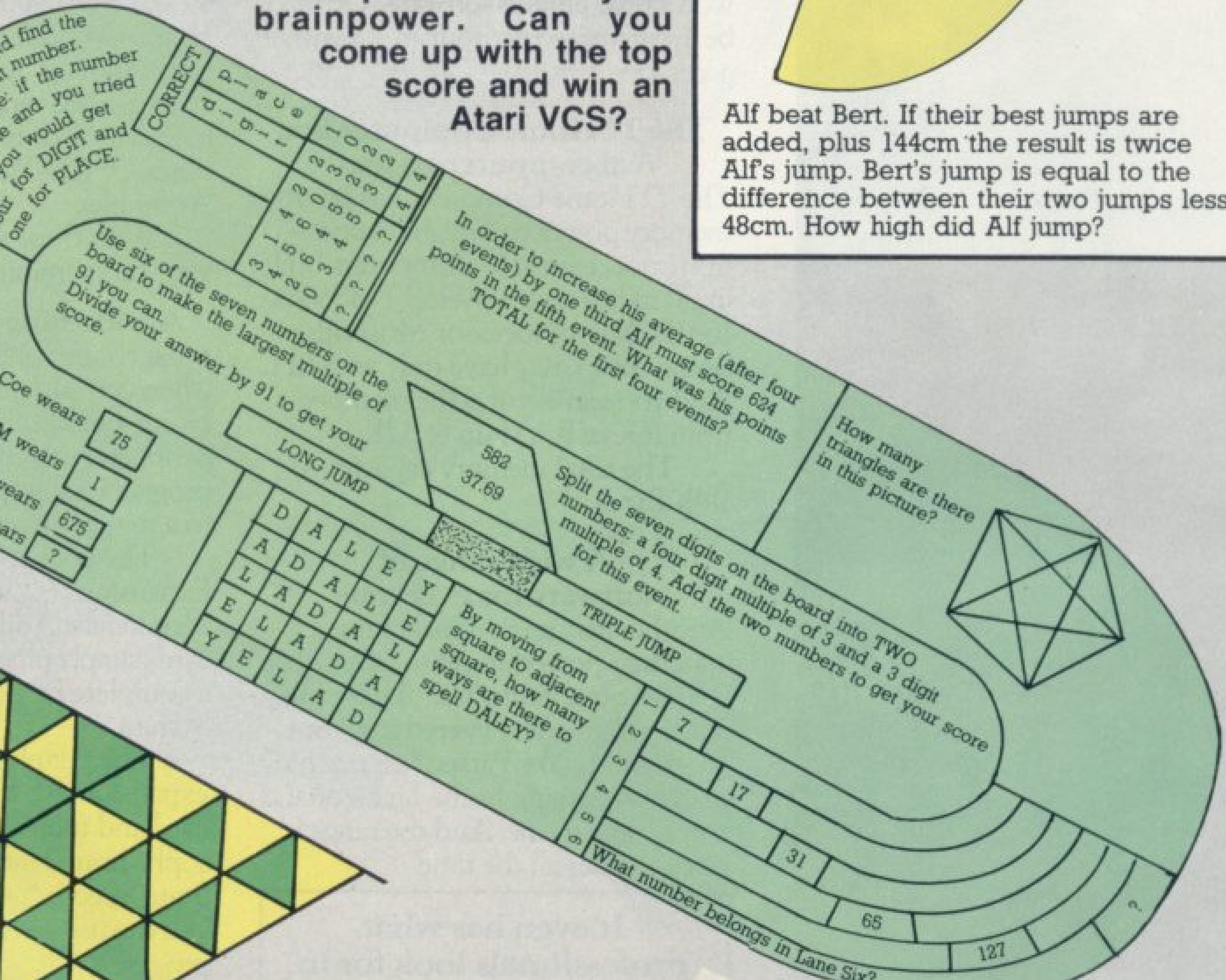
GET SET FOR THE DEVIOUS DECATHLON!

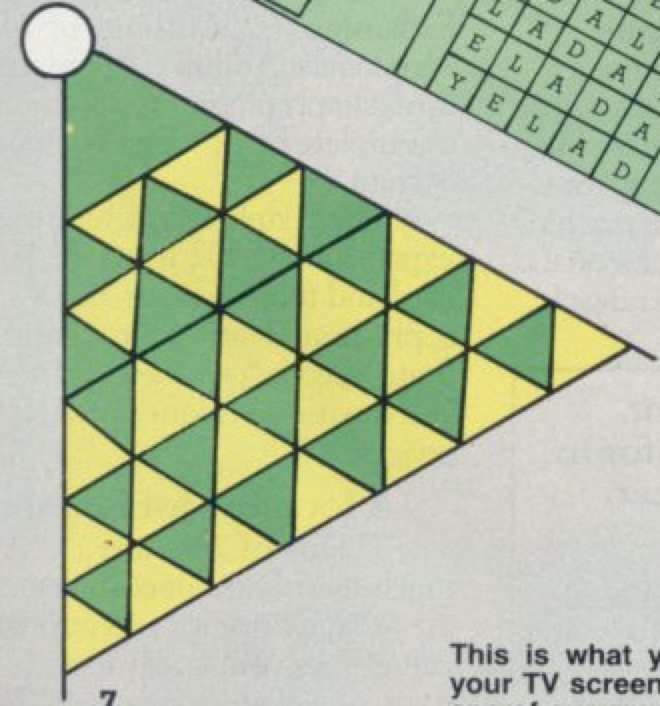
On your marks, get ready, GO! They are off and running in the *Computer and Video Games'* Devious Decathlon! Ten, yes ten Atari VCS video games systems are up for grabs in this test of your mental agility, plus copies of Activision's brand new Decathlon game. This features all the 10 challenges of the real-life Decathlon. So you can aim to be like Daley Thompson from the comfort of your own armchair!

Trevor Truran has come up with a puzzling equivalent to the Decathlon — ten posers to test your brainpower. Can you come up with the top score and win an Atari VCS?



Alf beat Bert. If their best jumps are added, plus 144cm the result is twice Alf's jump. Bert's jump is equal to the difference between their two jumps less 48cm. How high did Alf jump?

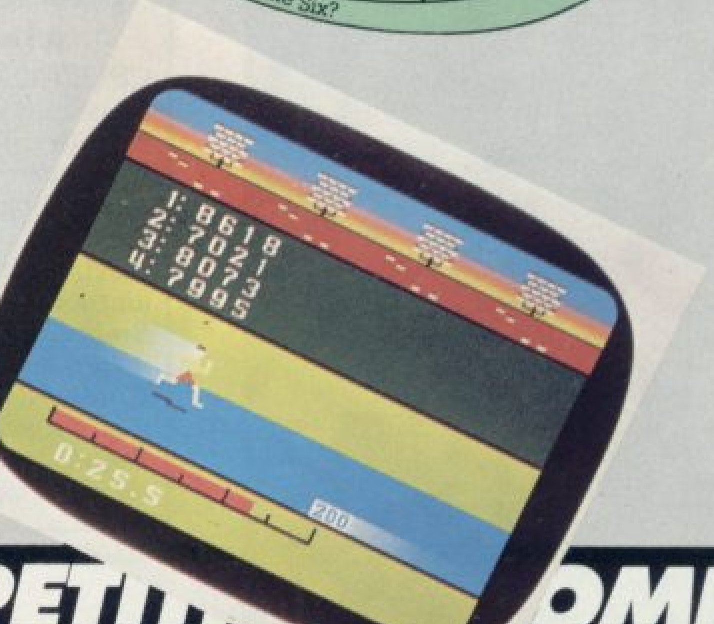




7

How many of the triangles of all sizes are more YELLOW than GREEN?

This is what you'll see on your TV screen if you win one of our grand prizes kindly donated by our friends at Activision, the Atari people who make many top selling games for the Atari VCS. This is just one screen in the game that takes you right through the Decathlon challenge.



COMPETITION COMPETI... OMPET



THE RULES

You can win one of ten Atari VCS video games systems by solving our Devious Decathlon puzzle. We know it's a bit of a marathon — but we reckon it'll keep you thinking over the Christmas holidays.

To give you a bit longer to work out Trevor Truran's mind-twisting athletic action for intellectuals we're keeping the contest open until January 16th.

Thanks to our friends at Activision, who are supplying the Atari systems, we've also got 10 brand new Decathlon game cartridges to give away — so you'll have something to play with if you win one of these great prizes.

All you have to do is work your way around the *C&VG* athletics track answering the questions as you go. The answer to each puzzle is a number which you enter as your score for that event in the coupon provided.

Your aim is to find the highest possible score for each round in the Decathlon — and therefore the highest final total.

You may, if you wish, take a guess at the answer, but beware! If your guess is higher than the maximum possible score for that puzzle then you'll get a zero score from the judges!

Send in your completed coupon to Decathlon Competition, *Computer and Video Games*, Durrant House, London, EC1R 5EJ. Normal *C&VG* contest rules apply and the editor's decision is final.

QUESTIONS AGAIN?

1. By moving from square to adjacent square, how many ways are there to spell DALEY?
2. What number belongs in Lane Six?
3. How many triangles are there in this picture?
4. In order to increase his average (after four events) by one third Alf must score 624 points in the fifth event. What was his points TOTAL for the first four events?
5. Crack the code and find the secret four-digit number. Here's a clue: if the number had a nine and you tried 9999 you would get four for DIGIT and one for PLACE.
6. If Coe wears 75 and CRAM wears 1 and ELLIOT wears 675 then THOMPSON wears?
7. How many of the triangles of all sizes are more YELLOW than GREEN?
8. Alf beat Bert. If their best jumps are added, plus 144cm the result is twice ALF's jump. Bert's jump is equal to the difference between their two jumps less 48cm. How high did Alf jump?
9. Use six of the seven numbers on the board to make the largest multiple of 91 you can. Divide your answer by 91 to get your score. (long jump).
10. Split the seven digits on the board into TWO numbers: a four digit multiple of 3 and a 3 digit multiple of 4. Add the two numbers to get your score for this event. (triple jump).

WAR GAMERS

Fantasy film fans soon got to grips with our War Games competition and postcards came flooding in thick and fast! We've waded through the pile of mail to pick six winners who will be receiving the Thorn-EMI games cartridge based on the movie.

ATARI 400
Stephen McKone, 254 Grimsby Road, Cleethorpes, South Humberside, DN35 7ET.

Tim J. Hale, 70 Mayton Street, LONDON N7.

VIC-20
J. H. Turner, The Downs, The Warren, Ashtead, Surrey, KT21 2SA.

Gregory Brown, 34 Meynell Drive, Leigh, Lancs, WN7 3JR.

TI99/4A
John Platt, 15 Brynnewydd East, Prestatyn, Clwyd, LL19 9ES.

Simon Riley, 10 Church View, Westbrook Park, Kingsley, Cheshire, WA6 8EB.

Name ....

Address ....

....

....

ROUND

SCORES

1. ....
2. ....
3. .... □
4. .... □
5. .... □
6. .... □
7. .... □
8. .... □
9. .... □
10. .... □

TOTAL .... □

AGF PROGRAMMABLE JOYSTICK INTERFACE for Spectrum or ZX81

ONLY 32·95 +£1·00pP

MICRODRIVE COMPATIBLE

ABOUT OUR INTERFACE

The AGF Programmable Joystick Interface is a unique design offering the use of any Atari-compatible joystick with absolutely all software, whether it is cassette or ROM cartridge, with the Sinclair Spectrum or ZX81.

The hardware programmable interface requires no additional software and accurately replicates the keys of the computer in a manner which is responsive to absolutely *ALL* key reading methods, both BASIC and Machine Code.

The interface does not interfere with key operation and can therefore be used simultaneously with the keyboard.

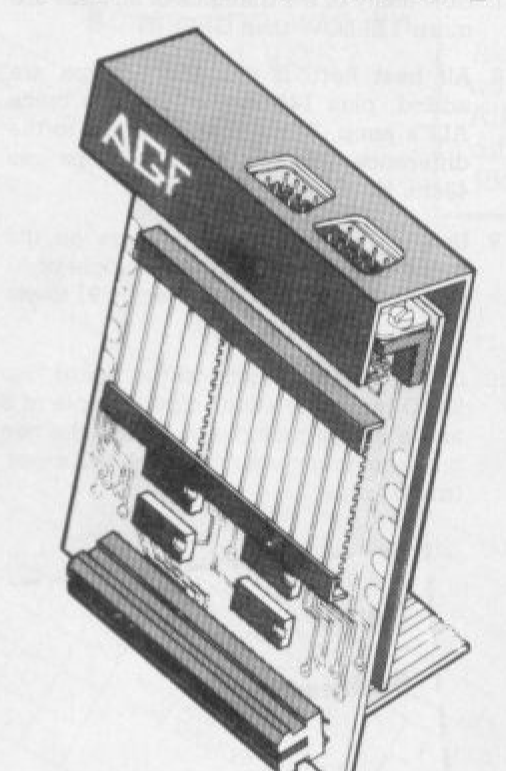
There is no need to remove the interface once fitted as the rear extension connector will accommodate further expansion, i.e printers or RAM packs etc. This important feature avoids excessive wear to the expansion port.

The key replication principle pioneered by AGF means that your own programs can use eight directional joystick movement by utilising simple key reading BASIC.

Two joystick sockets are provided which share the same keys, for use with the majority of two player games. Several interfaces may be used on the same computer for multiple joystick applications.

The interface is programmed by a two digit code, which is looked up on a programming chart supplied, for each direction and firing button. The two numbers are then selected on a pair of leads which are clipped onto appropriately numbered strips on the interface.

Once configured this can be marked on a Quick Reference Programming Card for storing with the game. As the programming is *not* power dependent the interface retains the last configuration made and can be immediately used when next switched on.



KEY FEATURES

- ★ Programmable design gives TOTAL software support.
- ★ Accepts Atari, Competition Pro, Wico, Starfighter, Quick Shot, Le Stick etc.
- ★ Rear extension connector for all other add-ons.
- ★ Free demo program and instructions.

PACKAGE CONTENTS SUPPLIED

- Programmable Interface Module as illustrated, complete with clip-on programming leads.
- Self adhesive programming chart detailing how to define which key is simulated by UP, DOWN, LEFT, RIGHT, and FIRE. This can be fixed on to the case of your computer or if preferred the protective backing can be left on. The chart is made of a very durable reverse printed plastic and is extremely easy to read.
- One pack of ten Quick Reference Programming Cards for at-a-glance setting to your games requirements. The card allows you to mark the configuration in an easy to read fashion with space to record the software title and company name.
- Video Graffiti demonstration program which is written totally in BASIC to illustrate how all eight directions and fire can be read. This is also a useful high resolution drawing program.
- 12 months guarantee and full written instructions.

JOYSTICKS

CONTROLLERS

FOR USE WITH OUR INTERFACE Module or VIC 20, Commodore 64, Atari VCS, Atari 400, Atari 800

If you require extra Joysticks for our original interface module mark order 'OLD' Joysticks

ONLY £7.54 inc VAT + P&P

FROM: MR/MRS/MISS

ADDRESS

SEND C.W.O. (NO STAMP NEEDED) TO: A.G.F. HARDWARE, DEPT. CVG,
FREEPOST, BOGNOR REGIS, WEST SUSSEX, PO22 9BR

QTY	ITEM	ITEM PRICE	TOTAL
	PROGRAMMABLE INTERFACE	33.95	
	JOYSTICK(S)	7.54	
	PACK(S) QUICK REFERENCE CARDS	1.00	
ONE	VIDEO GRAFFITI	FREE	
	ZX81 ☐ ZX SPECTRUM ☐ Please tick	FINAL TOTAL	

DEALER ENQUIRIES WELCOME *EXPORT PRICES ON APPLICATION*

TION COMPETITION COMPETITION CO

EXPECT THE UNEXPECTED WITH THE TERRAHAWKS!

"Ha, ha, ha, ha, ha! So, these are the puny humans who think they can stop Zelda, queen of evil and ruler of the spaceways. They may have all the sophisticated equipment their insignificant earth science can provide but it's still no match for my mighty powers! They may be able to thwart my invasion plans from time to time — but there is no doubt about the final outcome. Zelda will be victorious!"

As nasty old Zelda has just informed you this is the Terrahawks team, pledged to defend the Earth from alien attacks. Each week on your TV screens the Terrahawks go into action — fighting off increasingly cunning attacks thought up by the evil Zelda.

We've got a couple of Philips G7000 video games systems to give away in our great Christmas Terrahawks contest — complete with the brand new games cartridge based on the TV series. All you have to do is watch the show, created by Thunderbirds man Gerry Anderson, and then answer our Terrahawks questions. Do it before Zelda gets to you!



1 THIS PICTURE SHOWS ANOTHER STAR OF THE TERRAHAWKS SERIES SERJEANT-MAJOR ZERO — THE LOVABLE LEADER OF THE ZEROIDS. WHAT PARTICULAR POWER DOES HE HAVE WHICH HELPS GET THE TERRAHAWKS OUT OF TIGHT CORNERS?



2 CAN YOU NAME THE TERRAHAWKS TEAM PICTURED ABOVE?

3 WHO, OR WHAT, IS HUDSON?

4 THE CHIEF OF THE TERRAHAWKS IS A MAN OF MYSTERY. WHAT IS HIS SECRET? HERE'S A CLUE. HE OFTEN FINDS HIMSELF IN DOUBLE TROUBLE!



Send your answers on postcards only please, to Terrahawks, *Computer and Video Games*, Durrant House, Herbal Hill, London EC1R 5EJ. The closing date is December 16th, and normal *C&VG* competition rules apply. The editor's decision is final.

TION COMPETITION COMPETITION CO

HUNT THE RACING ENDURO CHAMPION

James Hunt was the last British racing driver to hold the coveted Formula One World Championship title — and we had hundreds of postcards telling us so after we launched out Activision Enduro competition a couple of issues ago. We delved into the sack of mail to pick out ten lucky winners who will all receive an Enduro cartridge for their Atari VCS. The winners are; Darren Hearn from Bristol; Michael Shipley who lives in Bucks; Sinead Corkery from Berkshire; Cad Delworth from Edinburgh; Michael Tomordy of Hertfordshire; Andrew Lloyd from Gloucester; Peter Clarke from Oxfordshire; Mr G. Davis from Wolverhampton; Paul Mogford from Gwent and N. Armstrong from Cheshire. Congratulations to all of you!

GET YOUR FREE GAMES HERE!

We've still got 20 FREE Imagine games tapes for the Vic-20. The first 20 postcards picked out of the sack will each receive a copy of Imagine's new Bewitched game. Don't delay, send your postcard in to Bewitched, *Computer and Video Games*, Durrant House, 8 Herbal Hill, London, EC1R 5EJ. Don't forget to include your name and address on your postcards!

Meanwhile Atari owners living in Portsmouth and Southampton can claim 100 FREE copies of Imagine's Leggit game. This runs on the Atari 400/800 and 600 XL and we'll be giving games tapes away to the first 100 people who send in the coupon below. Your entry must be postmarked from either one or the other of these two famous seaports to qualify. Cut out and send in the coupon marked Leggit, *Computer & Video Games*, Durrant House, 8 Herbal Hill, London EC1R 5EJ.

Name ....

Address ....

....

....

HERE'S YOUR CUE TO HELP FREDDY POT THE BLACK!

The game hangs in the balance. Everything depends on this final shot. If Freddy Frinkle, the man with the Golden Cue, misses this shot he will hand the title to the young pretender Simon Smooth.

The pressure begins to tell. The normally smooth green baize table suddenly starts to swim in front of his eyes and is transformed into a mind-boggling maze. He wipes his fevered brow and blinks his eyes — but the strange maze remains.

What can he do? Can you help Freddy clinch the championship? Simply find a path through the maze to the black — and pot it!



We've got 25 copies of the latest snooker game from new software house Visions — autographed by snooker champ and video games fan Steve Davis — up for grabs in our Pot the Black contest.

All you have to do is find your way through the snooker maze created by artist Ross Collins, solve the snooker riddle we've posed, and quickly send off the coupon with your maze solution, cut from the magazine, to the C&VG office. The first 25 correct answers out of *C&VG's* memory bin will receive a prize.

Visions' snooker program runs on five machines, the Spectrum, BBC B, Vic-20, Commodore 64 and the new Electron. There are five games tapes on offer for each machine — so don't forget to tell us which particular version you want if we pick you out of the bin. Send your entries to *Computer and Video Games*, Pot the Black, Durrant House, 8 Herbal Hill, London EC1R 5EJ.

THE QUESTION: Could there ever be a "break" of 162 in a game of snooker? Get your thinking caps on — solve the maze and answer the question and a snooker cartridge could be yours!

The answer to the snooker poser is ...

....

....

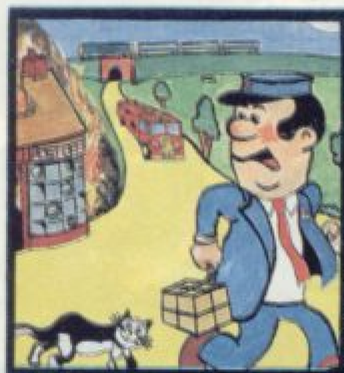
Name ....

Address ....

....

....

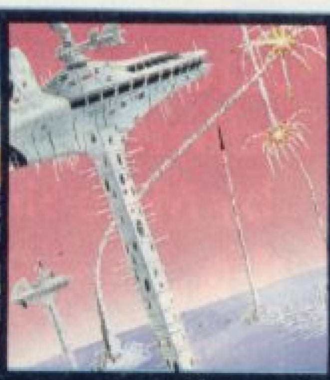
Computer you own ....



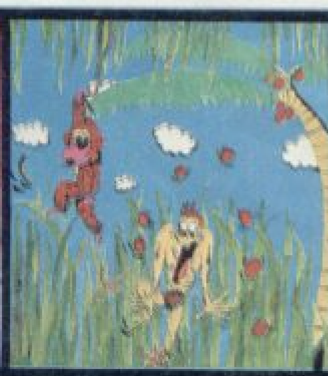
Pat the Postman
Really original. All Pat has to do is collect parcels whilst avoiding obstacles – like cars, fires, trains, etc. Skill level and Hall of Fame.
48K Spectrum. £6.95



Deffendar
Earth is under attack from mutant aliens in an accurate implementation of a top arcade game – and one of the most difficult to survive in!
48K Spectrum. £6.95



Cruise Attack
Save the city from annihilation in this wonderful version of an arcade favourite. Nine skill levels, bonus points for attack ships.
48K Spectrum. £6.95



Nanas
Catch the bananas, miss the coconuts. Easy? Try it and see. Simple in concept, hilariously entertaining – it'll drive you bananas.
16K Spectrum. £5.95



Timequest
A warp-space accident spreads your capsule across time. As you land in each new era, fresh perils face you. A very skillful graphic adventure
48K Spectrum. £6.95



One Hundred & Eighty
That famous shout tells you what it's all about! A good implementation of a difficult game – doubles, trebles, twenty-five and bull all possible.
48K Spectrum. £6.95



Land of Sagan
A quest to find the long lost Staff of Health. Is it in one of the castles? Or in the Tower? There are plenty of problems – and plenty of opponents – in this great graphic adventure.
48K Spectrum. £6.95



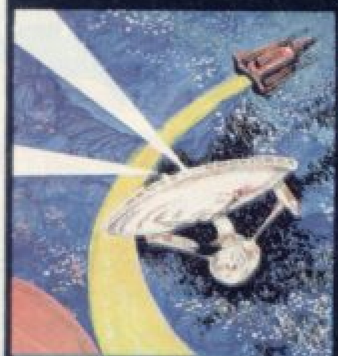
Creepy Crawler
An authentic version of one of the most addictive arcade games devised. All the usual features (Centipede, Spider, Bug, etc) with full use of Spectrum graphics and sound.
16K Spectrum. £5.95



Mad Martha II
Great sequel to the best-selling Mad Martha. Hilarious graphic adventure, with hero Henry in sunny Spain, beset by wacky waiters, mad bulls and the wrathful Martha.
48K Spectrum. £6.95



SAS Assault
Your mission – rescue the Russian ambassador from terrorist kidnappers, before the Kremlin declares war. Loads in two parts – your rating in the second depends on your skill in the first.
48K Spectrum. £6.95



Star Trek
Defend the star systems against the Klingon attack. Runs in real time – so you have to make the right decisions fast!
48K Spectrum. £6.95



Drakmaze
Find your way round Dracula's domain. A game to get your teeth into!
48K Spectrum. £6.95



Laserwarp
Invaders, Aliens, this game has the lot – and you have to survive to destroy the Master! Simple controls, far from simple task.
48K Spectrum. £6.95



Knockout
No aliens, lasers, invaders or rockets – just simple but absorbing fun which up to 4 players can enjoy.
48K Spectrum. £6.95



Galakzions
Watch out as the Galakzions break formation to attack in such force that no mere human can survive!
16K Spectrum £5.95

See them at Lightning, PCS, Tiger, Co-op, Menzies, W H Smith & other leading retailers

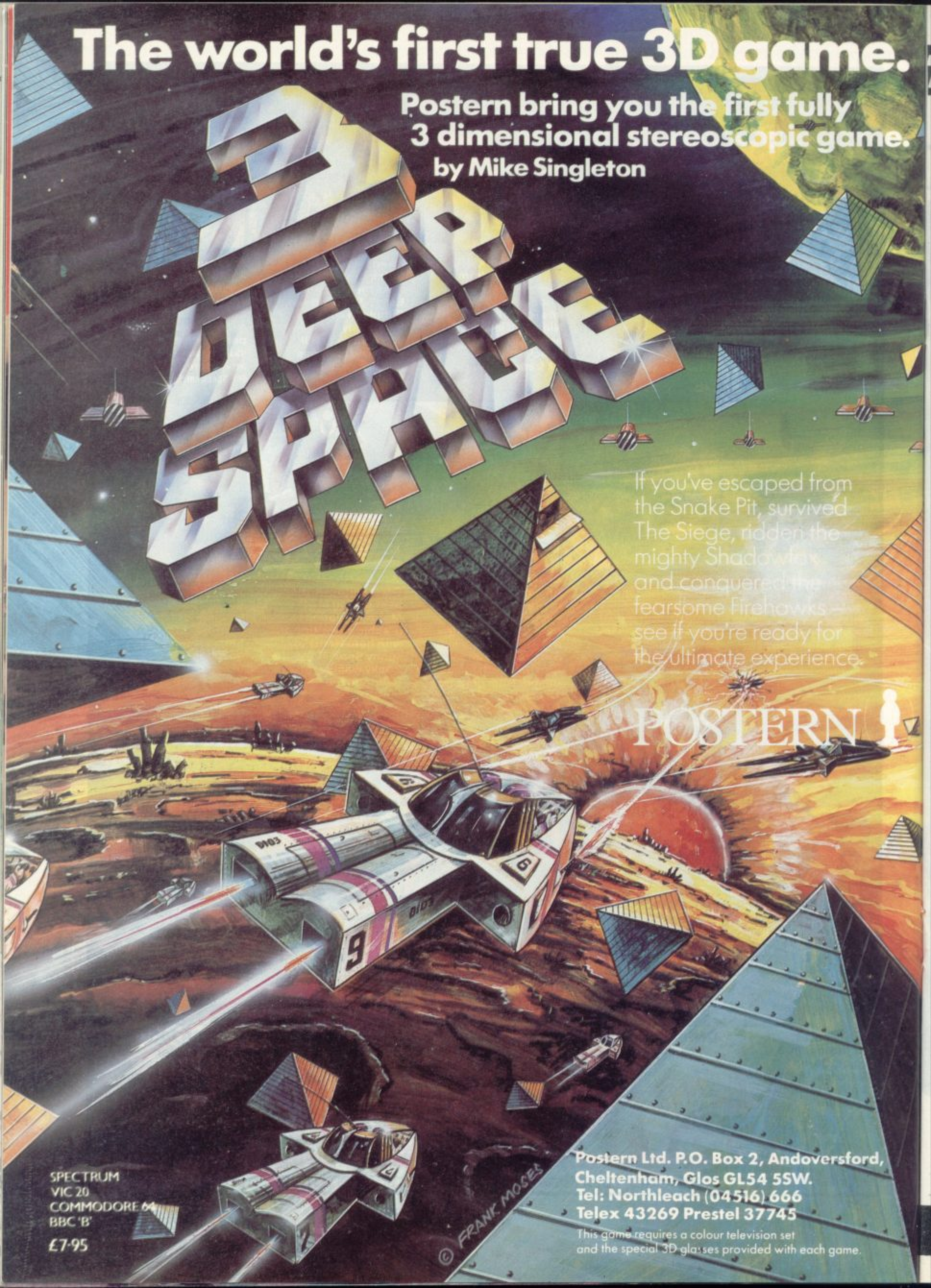
PHONE YOUR VISA OR ACCESS NUMBER

Other great new Mikro-Gen programs coming soon – watch out for them!

Please make cheques/PO payable to 'Mikro-Gen' and add 40p post & packing per order.

MIKRO-GEN

Mikro-Gen, 1 Devonshire Cottages, London Rd, Bracknell RG12 2TQ Tel: 0344 27317



The world's first true 3D game.
Postern bring you the first fully 3 dimensional stereoscopic game.
by Mike Singleton
3 DEEP SPACE
If you've escaped from the Snake Pit, survived The Siege, ridden the mighty Shadowfax and conquered the fearsome Firehawks – see if you're ready for the ultimate experience.
POSTERN
SPECTRUM
VIC 20
COMMODORE 64
BBC 'B'
£7·95
FRANK MOSES
Postern Ltd. P.O. Box 2, Andoversford, Cheltenham, Glos GL54 5SW.
Tel: Northleach (04516) 666
Telex 43269 Prestel 37745
This game requires a colour television set and the special 3D glasses provided with each game.

TION COMPETITION COMPETITION CO

LAST CHANCE TO WIN A CHEQUE-MATE!



Illustration by Debbie Cook

Here's your second — and final — chance to enter our amazing Chess competition. All you have to do is read the rules below and then start planning your next move. Very soon a wonderful *Ambassador* Chess computer could be yours!

If you missed our last issue — how could you! — you won't know that the *Ambassador* is a powerful, expandable Chess computer.

It doesn't look much like a computer, more like a regular Chess board. That makes it extremely easy to use — the Chess pieces are moved in the conventional way on the board.

You don't have to bother about a keyboard to type in moves or squint at a screen to see what's going on. The board registers each move using its automatic sensory capabilities.

The *Ambassador* has 10 skill levels to cope with beginner and expert alike, and also has two analysis levels — useful for solving chess problems or playing correspondence Chess. All this can be yours. Read on!

"Curious, isn't it," said Alice. "What is?" barked the Red Queen irritably. "These computer things," replied Alice, "It seems that these days young people don't go adventuring through the Looking Glass like I did, but use these micro-computers instead." "Rubbish!" shouted the Red Queen, you know micro-computers don't really exist. They are just a figment of the White Knight's imagination!"

"It must be interesting to go through a computer screen," Alice continued unruffled by the Red Queen's outburst. "I wonder what Computerland looks like?" she added with a wistful look in her eye. "Be quiet girl!" the Red Queen was obviously getting annoyed. "Eat your dry biscuit!" Alice stood up and strode away from the blustering Queen. "Where are you going!" the Red Queen shouted after her. "To find the White Knight," Alice said forcefully, "I want to find out all about these micro-computer things!"

While Alice is off discovering the magical world of micro's we've got a little task for you too. And you could win a Chess computer!

Can you dream up an adventure game based on the theme of the Chess board — just like Lewis Caroll did in his second Alice adventure *Through the Looking Glass*?

What we'd like you to do is to look at your Chess board and imagine that it has been transformed into a magical land.

Dream up some characters to inhabit your Chess-board world, and a hero to move through it. Perhaps he's searching for a lost treasure or an imprisoned princess — or on a quest to destroy all evil on the board world. Use the standard moves for chess pieces as a basis for moving your characters about in Chess-world — or dream up some new moves of your own! All that we require is that you use the chequered board as the basis for your imagination to work on.

We'd like you to attempt to write a listing for your Adventure if you can — but it's not essential. If you like you can simply give us an idea, backed up with diagrams and documentation of how your game would work on a micro. And if you don't feel like writing an Adventure why not have a go at creating a graphic video-style game based on a Chess theme?

The winner will receive an *Ambassador* Chess Computer from Contemporary Chess Computers, details of this amazing prize can be found elsewhere on this page. Runners-up will get Chess software for their computers. So don't forget to let us know what micro you own. The coupon below should accompany your entry.

As this is quite a complicated task we're giving you three months to come up with a great idea and send it to us. So you've got until January 16th 1984 to get your idea to us. Address your entries to Chess Competition, *Computer and Video Games*, Durrant House, 8 Herbal Hill, London EC1R 5EJ. The usual competition rules apply and the editor's decision is, as always, final!

Please enter my game in the C&VG/Contemporary Chess Computers Competition

Name ....

Address ....

....

Telephone number ....

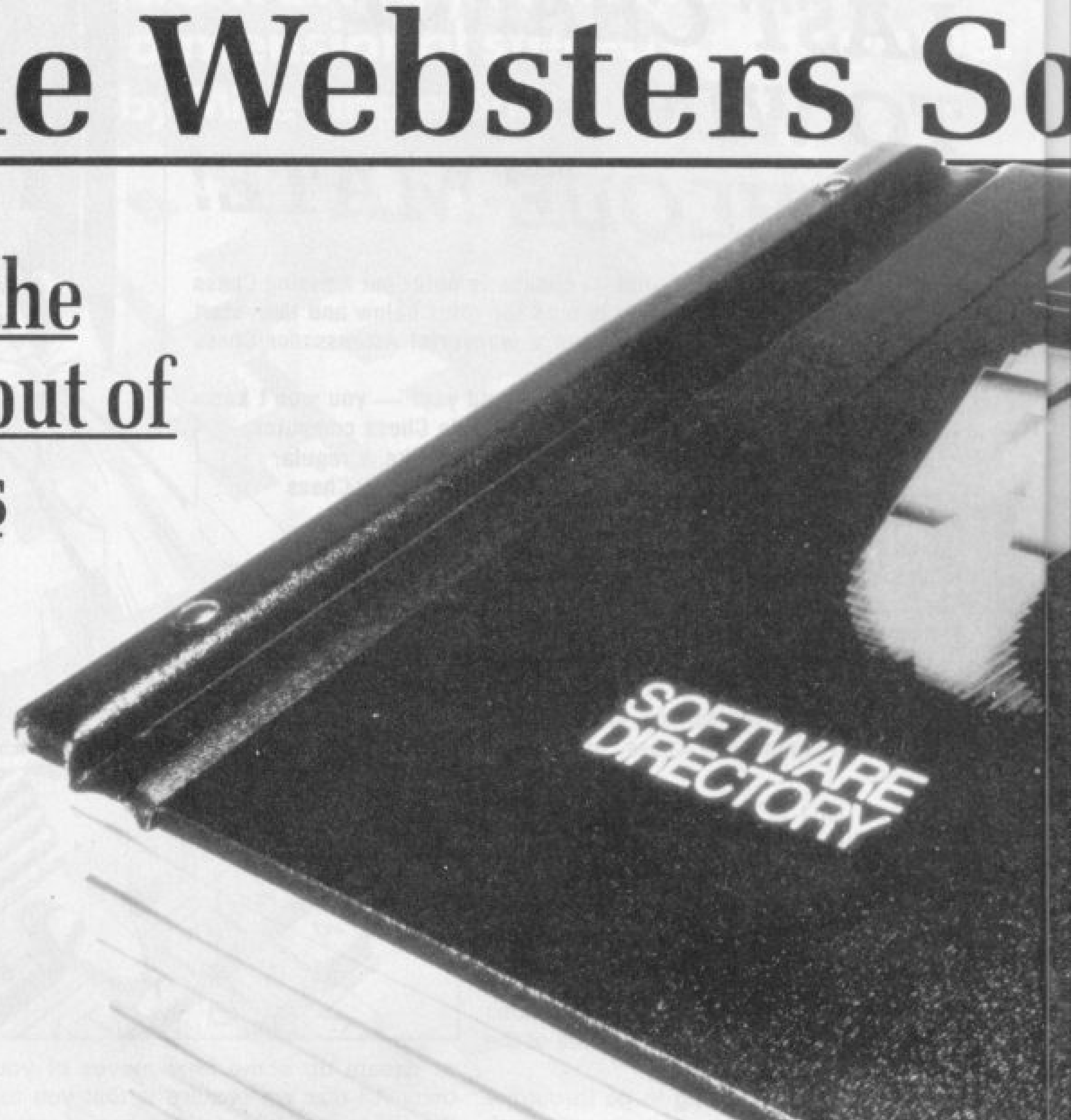
Name of Game ....

Type of Game/video-style or Adventure ....

Computer your game runs on/computer you own ....

COMPETITION COMPETITION CO PET

The Websters So

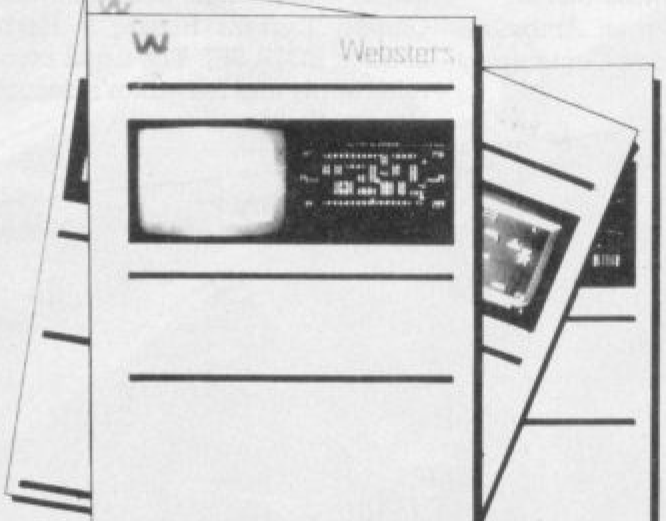


It takes the guesswork out of the business of selling software.

If you're a high street retailer then personal computer software is one of the biggest opportunities ever to come your way. The Websters Software Directory will help you take that opportunity and turn it into pound notes – quickly, simply and profitably.

A unique selling medium.

Nobody else has anything like it. Used at the point of sale, in conjunction with normal display methods, the Directory will turn your store into a recognised and authoritative software centre. Instantly, without fuss or bother, your customers will be able to browse



through all the best selling software titles for all the top selling brand name home computers.

Game players, computer buffs, school children, teachers, students and businessmen. Everybody wants to be able to find the software they're looking for quickly and easily. All will gravitate towards your store and your copy of the Websters Software Directory.

Maximum display value in the minimum space.

The first edition of the Directory contains 240 pages, each showing details of one software title. By the time the second update

oftware Directory



takes place in early 1984, the total will have risen to 400 pages. From then on, each copy of the Directory will be updated quarterly so that, at all times, in your store, consumers will be able to find all the information they need about personal computer software. There simply isn't a better or more effective way of showing the consumer what each program offers.

Shows what actually appears on the screen.

All this happens in your store, right at the point of sale. *Nowhere else can the consumer go and see two full colour action photographs of what the screen actually shows when the program is run.* The Directory is at the heart of every home computer owner's buying needs. An indispensable reference point, indispensable in your store.



The Websters Software Directory is at the centre of a comprehensive personal computer software service. Our current stock list contains all the best selling titles from all the leading software houses. Programs are available for use on Sinclair, Commodore, BBC, Dragon, Texas Instruments, Atari, Acorn, Oric, Lynx and Mattel microcomputers.

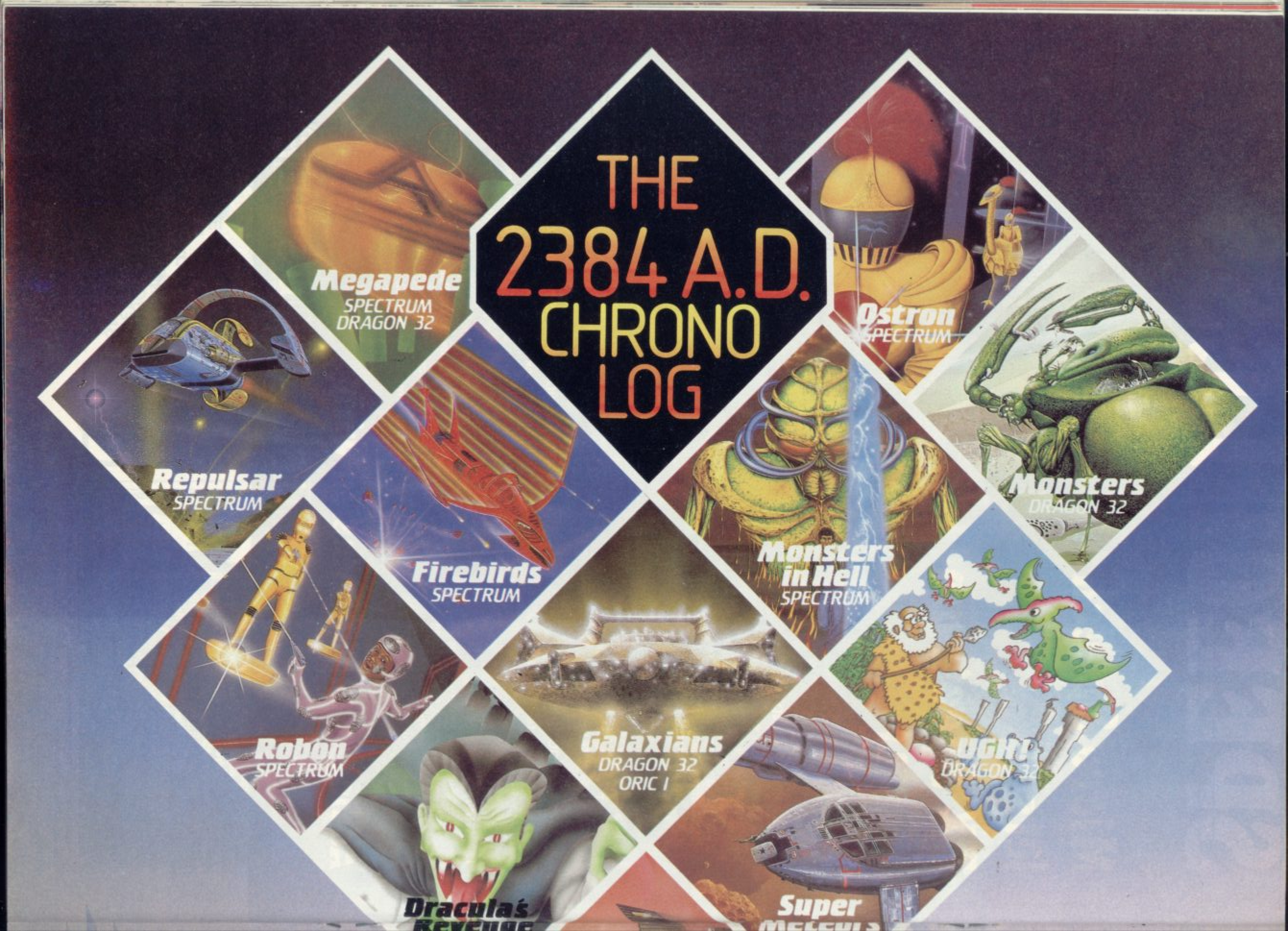
Presents program information consistently.

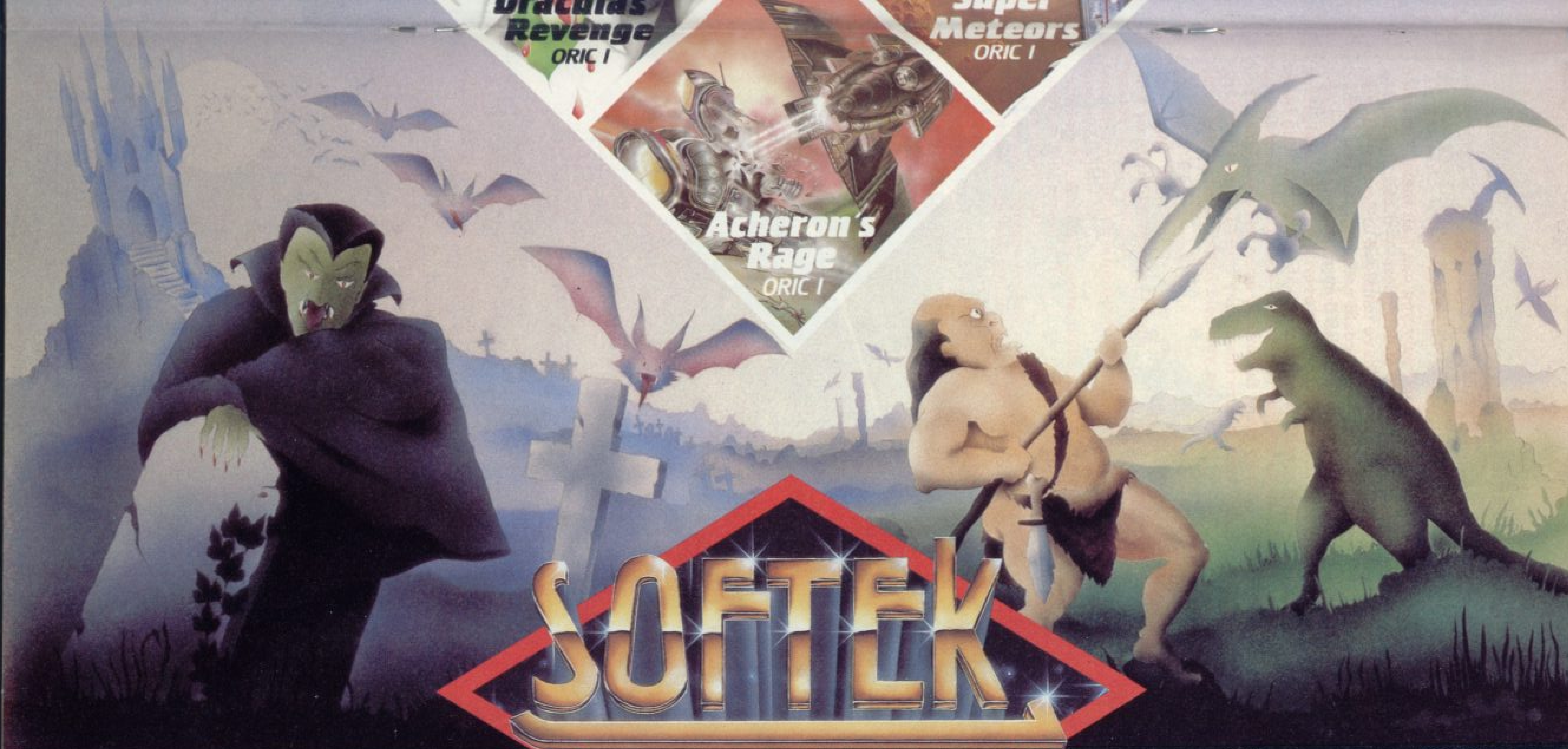
At long last the home computer owner will have comprehensive and accurate information about each software title available in an easily understood way. The whole process of selecting from the huge range of programs currently available becomes easier and much more fun. The Directory answers everybody's questions and does everything possible to help the customer buy.

Websters
SOFTWARE

Please ask for further details or if you wish a representative to call.

Frances Cheyne, Websters Software Ltd., Langham Park, Cattes Hall Lane, Godalming, Surrey GU7 1NG. Telephone: Godalming (04868) 4152.


THE
2384 A.D.
CHRONO
LOG
Megapede
SPECTRUM
DRAGON 32
Ostron
SPECTRUM
Repulsar
SPECTRUM
Monsters
DRAGON 32
Firebirds
SPECTRUM
Monsters
in Hell
SPECTRUM
Robon
SPECTRUM
Galaxians
DRAGON 32
ORIC I
DRAGON 32
Draculas
Super



SOFTEK

MASTERS OF THE GAME

JANUARY

Sun	Mon	Tues	Wed	Thur	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

FEBRUARY

Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH

Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL

Sun	Mon	Tues	Wed	Thur	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY

Sun	Mon	Tues	Wed	Thur	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE

Sun	Mon	Tues	Wed	Thur	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

SINCE THE DAWN OF TIME....
SOFTEK BRINGS THE FUTURE
TO YOUR FINGERTIPS.

2384 A.D, the chronological twin of 1984

JULY

Sun	Mon	Tues	Wed	Thur	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24/31	25	26	27	28	29	30

AUGUST

Sun	Mon	Tues	Wed	Thur	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

Sun	Mon	Tues	Wed	Thur	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

Sun	Mon	Tues	Wed	Thur	Fri	Sat
						1
2	3	4	5	6	7	8
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER

Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

Sun	Mon	Tues	Wed	Thur	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

L.E.T. SHOW MIDLAND COMPUTER FAIR EARLS COURT COMPUTER FAIR PERSONAL COMPUTER WORLD SHOW NORTHERN COMPUTER FAIR

Softek International Limited 12/13 Henrietta Street Covent Garden London WC2E 8LH Tel: 01 240 1422/7877

TANK

RUNS ON A TEXAS TI 99/4A IN 8.5K

BY ANDREW LEES

Enemy Panzer divisions are advancing — and only you can halt them! You are a tank commander in control of a small group of defenders — protecting the last remaining bridge across the river. Your troops have managed to destroy all other bridges — but could not reach this one in time.

So your only hope is to blast the enemy tanks as they race across the bridge. You have positioned your tank on a vantage point overlooking the bridge and can blast the enemy at will. But beware — they'll be shooting back.

You must adjust the angle of your gun before each shot to score direct hits on the enemy as they cross the bridge using different lanes. You have three lives to play with before the enemy overruns your territory. Can you hold back the armoured tide?

Variables
Life = lives left.
Shot = number of shells per tank.
Score = points scored.
Y = horizontal position of tank gun.
G = length of gun.
F = position where your tank is firing from.
T = where shot will land.
Le = length of shot.
Vert = vertical position of enemy tank.
Hor = horizontal positon of enemy tank.



```
30 FOR COL=2 TO 12
40 CALL COLOR(COL,COL+1,COL+
1)
50 NEXT COL
60 CALL SCREEN(2)
70 CALL CLEAR
80 PRINT "((00  888  h
H   AA   A"
90 PRINT "PPXX h    h pp
X   pp  p"
100 PRINT " xx   1     1 1 1
 0    (( ("
110 PRINT " 00   8    8 8  A
 p   AA` "
120 PRINT " HH   P    P H   H
 p   X1( "
130 PRINT " ``   hYFMh A    A
 0   88 8 "
140 PRINT " xx   1     1 0
00    ((  ("
150 PRINT " 00   8     8 H
 H   AA   A"
160 PRINT ::::::::
170 FOR I=1 TO 500
180 NEXT I
190 CALL CLEAR
200 CALL SCREEN(16)
210 FOR I=1 TO 12
220 CALL COLOR(I,2,1)
230 NEXT I
240 PRINT "WANT INSTRUCTIONS
(Y/N)?"
250 CALL KEY(0,K,S)
260 IF K<1 THEN 250
270 IF K=78 THEN 290 ELSE 24
20
280 GOTO 250
290 LIFE=3
300 CALL CHAR(54,"FFFF7E7E3C
3C1818")
```

```
310 CALL CHAR(55,"3C3C3C3C3C
3C3C18")
320 DIM P(21)
330 CALL COLOR(9,9,1)
340 DIM R(24)
350 SHOT=1
360 CALL COLOR(8,5,1)
370 CALL COLOR(1,4,4)
380 CALL SCREEN(8)
390 SCORE=0
400 CALL COLOR(13,7,15)
410 CALL COLOR(15,3,15)
420 CALL COLOR(16,3,15)
430 CALL COLOR(12,15,15)
440 CALL CHAR(120,"FFFFFFFF
FFFFFFFFFF")
450 CALL COLOR(11,13,15)
460 CALL COLOR(2,2,15)
470 Y=5
480 G=1
490 RANDOMIZE
500 CALL CHAR(113,"000000FF0
000000F")
510 CALL CHAR(112,"3C7EFFFF
FFF7FFF")
520 CALL CHAR(145,"0000E0F0F
0E080FF")
530 CALL CHAR(146,"FF7F3F1F0
F070301")
540 CALL CHAR(152,"FFFFFFFFA
A55AAFF")
550 CALL CHAR(153,"FEFFFFFFF
EFCF8F0")
560 CALL CHAR(154,"000080")
570 CALL CHAR(101,"18183C3C7
E7EFFFF")
580 CALL CHAR(91,"183C3C3C3C
3C3C3C")
590 CALL CLEAR
600 CALL CHAR(135,"FFFFFFFF
FFFFFFFF")
610 REM  BRIDGE
620 CALL HCHAR(11,1,135,32)
630 CALL VCHAR(12,8,135,4)
640 CALL VCHAR(12,16,135,4)
650 CALL VCHAR(12,24,135,4)
660 CALL VCHAR(12,32,135,4)
670 CALL HCHAR(8,1,45,32)
680 CALL HCHAR(7,1,120,32)
690 CALL HCHAR(6,1,120,32)
700 CALL HCHAR(4,1,120,32)
710 CALL HCHAR(3,1,120,32)
720 CALL HCHAR(9,1,120,32)
730 CALL HCHAR(10,1,120,32)
740 CALL HCHAR(5,1,45,32)
750 CALL HCHAR(2,1,45,32)
760 CALL HCHAR(1,1,135,32)
770 CALL CHAR(137,"7E7E7E7E7
E7E7E7E")
780 CALL CHAR(136,"3C3C3C3C3
C3C3C3C")
```

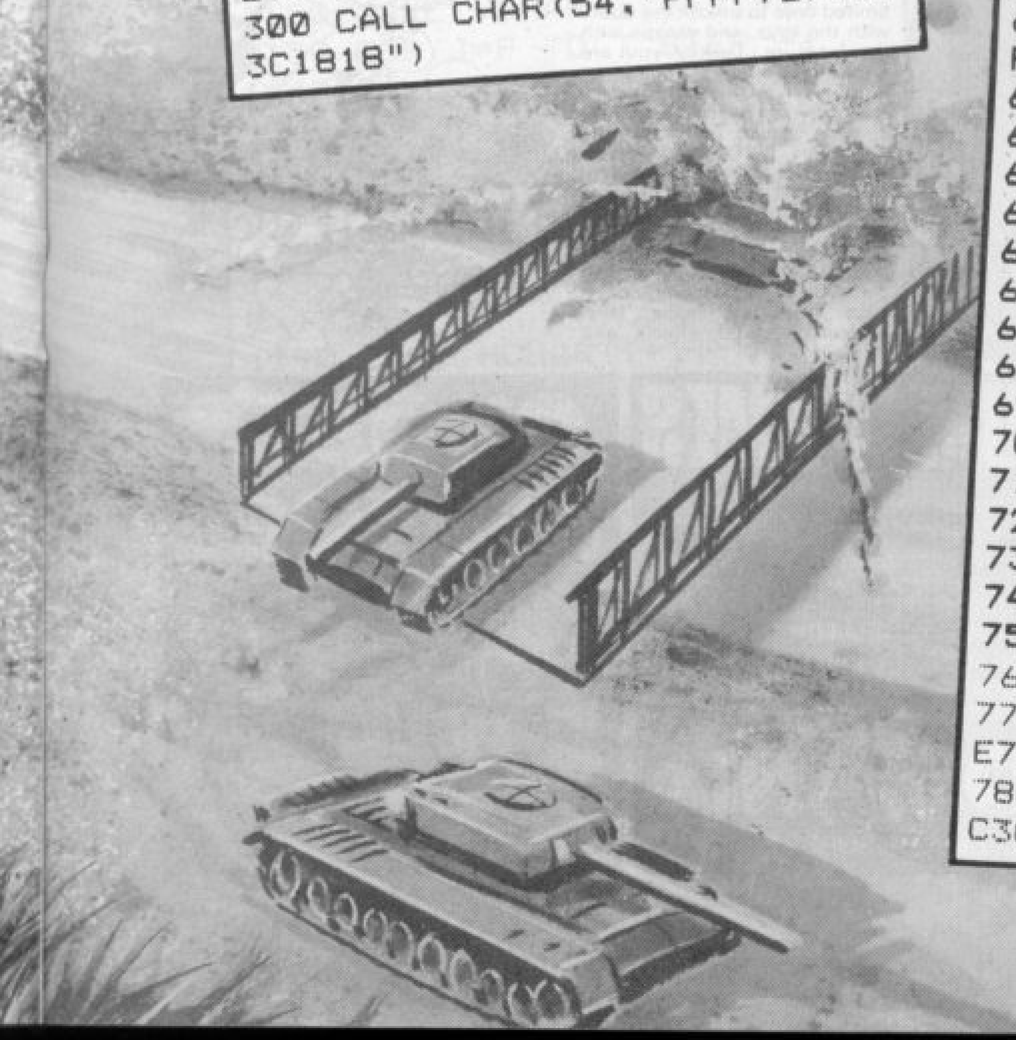
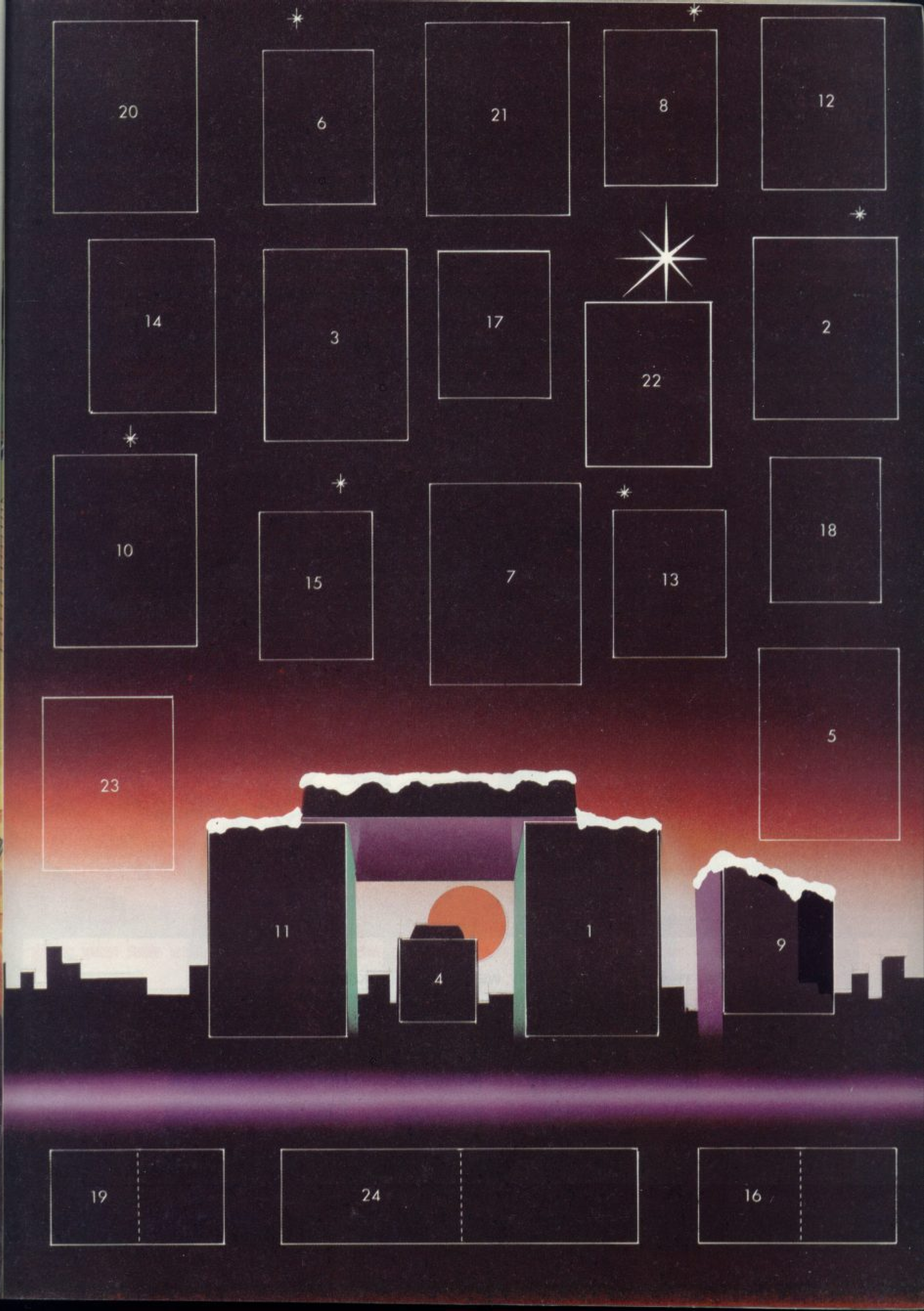


Illustration: John Higgins

```
790 CALL CHAR(138,"FFFFFFFFF
FFFFFFF")
800 CALL COLOR(14,13,4)
810 GOTO 1700
820 CALL KEY(0,M,S)
830 IF M=69 THEN 890
840 IF M=88 THEN 930
850 IF M=83 THEN 970
860 IF M=68 THEN 1010
870 IF M=32 THEN 1060
880 GOTO 1810
890 G=G+1
900 IF G>3 THEN 910 ELSE 920
910 G=3
920 GOTO 1360
930 G=G-1
940 IF G<1 THEN 950 ELSE 960
950 G=1
960 GOTO 1360
970 Y=Y-1
980 IF Y<3 THEN 990 ELSE 137
0
990 Y=3
1000 GOTO 1360
1010 Y=Y+1
1020 IF Y>27 THEN 1030 ELSE
1360
1030 Y=27
1040 GOTO 1360
1050 REM  USERS SHOOTING SEQ
UENCE
1060 IF SHOT=0 THEN 1360
1070 CALL GCHAR(T,Y+2,XX)
1080 FOR I=F TO T STEP -1
1090 CALL GCHAR(I+1,Y+2,R(I)
)
1100 NEXT I
1110 CALL VCHAR(T,Y+2,101,LE
)
1120 CALL VCHAR(T,Y+2,91)
1130 FOR J=F TO T STEP -1
1140 CALL VCHAR(J+1,Y+2,R(J)
)
1150 NEXT J
1160 CALL SOUND(1,1760,0)
1170 SHOT=SHOT-1
1180 IF XX=112 THEN 1200 ELS
E 1330
1190 CALL HCHAR(I+1,Y+2,120)
1200 SCORE=SCORE+20
1210 A$="SCORE="&STR$(SCORE)
1220 CALL COLOR(3,2,1)
1230 FOR I=1 TO LEN(A$)
1240 CALL HCHAR(1,I+2,ASC(SE
G$(A$,I,1)))
1250 NEXT I
1260 FOR I=1 TO 16
1270 CALL SCREEN(I)
1280 CALL SOUND(I,110*I,I)
1290 NEXT I
1300 CALL SCREEN(8)
1310 GOTO 1950
1320 XX=0
1330 CALL SOUND(200,-5,0)
1340 CALL HCHAR(I+1,Y+2,120)
1350 I=0
1360 CALL VCHAR(16,Y+2,32,8)
1370 CALL VCHAR(21,Y,138,4)
1380 CALL VCHAR(21,Y-1,32,4)
1390 CALL VCHAR(21,Y+4,138,4
)
1400 CALL VCHAR(21,Y+5,32,4)
1410 CALL VCHAR(16,Y+1,32,9)
1420 CALL VCHAR(16,Y+3,32,9)
1430 REM  USERS MOVING SEQUE
NCE & RAISING GUN SEQUENCE
1440 ON G GOTO 1450,1530,161
0
1450 CALL HCHAR(24,Y+2,138)
1460 F=20
1470 T=9
1480 LE=11
1490 CALL HCHAR(23,Y+2,137)
1500 CALL HCHAR(22,Y+2,136)
1510 IF Y+1=HOR THEN 2070
1520 GOTO 1810
1530 CALL VCHAR(23,Y+2,138,2
)
1540 F=17
1550 T=6
1560 LE=11
1570 CALL VCHAR(21,Y+2,137,2
)
1580 CALL VCHAR(19,Y+2,136,2
)
1590 IF Y+1=HOR THEN 2070
1600 GOTO 1810
1610 CALL VCHAR(22,Y+2,138,3
)
1620 LE=11
1630 T=3
1640 F=13
1650 CALL VCHAR(19,Y+2,137,3
)
1660 CALL VCHAR(16,Y+2,136,3
)
1670 IF Y+1=HOR THEN 2070
1680 GOTO 1810
1690 REM  ENEMY LANE SELECTI
NG
1700 K=INT(RND*3)+1
1710 IF K=1 THEN 1740
1720 IF K=2 THEN 1760
1730 IF K=3 THEN 1780
1740 VERT=9
1750 GOTO 1790
1760 VERT=6
1770 GOTO 1790
1780 VERT=3
1790 HOR=29
1800 REM  ENEMY MOVING ROUTI
NE
1810 HOR=HOR-1
1820 IF HOR=2 THEN 1950 ELSE
 1840
```

```
1830 GOTO 1950
1840 CALL HCHAR(VERT,HOR-1,1
13)
1850 CALL HCHAR(VERT,HOR,112
)
1860 CALL HCHAR(VERT,HOR+1,1
45)
1870 CALL HCHAR(VERT,HOR+2,1
20)
1880 CALL HCHAR(VERT+1,HOR-1
,146)
1890 CALL HCHAR(VERT+1,HOR,1
52)
1900 CALL HCHAR(VERT+1,HOR+1
,153)
1910 CALL HCHAR(VERT+1,HOR+2
,154)
1920 CALL HCHAR(VERT+1,HOR+3
,120)
1930 IF Y+1=HOR THEN 2070
1940 GOTO 820
1950 CALL HCHAR(VERT,HOR+1,1
20)
1960 CALL HCHAR(VERT,HOR+2,1
20)
1970 CALL HCHAR(VERT,HOR,120
)
1980 CALL HCHAR(VERT,HOR-1,1
20)
1990 CALL HCHAR(VERT+1,HOR+1
,120)
2000 CALL HCHAR(VERT+1,HOR+2
,120)
2010 CALL HCHAR(VERT+1,HOR+3
,120)
2020 CALL HCHAR(VERT+1,HOR,1
20)
2030 CALL HCHAR(VERT+1,HOR-1
,120)
2040 SHOT=1
2050 GOTO 1700
2060 REM  ENEMY SHOOTING ROU
TINE
2070 CALL HCHAR(VERT,HOR-1,1
20)
2080 CALL CHAR(114,"3C7EFFCF
CFFF7FFF")
2090 CALL HCHAR(VERT,Y+1,114
)
2100 CALL HCHAR(VERT,Y+2,120
)
2110 LE=0
2120 FOR I=VERT+2 TO 21
2130 LE=LE+1
2140 CALL GCHAR(I,Y+2,P(I))
2150 NEXT I
2160 CALL GCHAR(Y+2,21,B)
2170 CALL COLOR(3,10,1)
2180 CALL VCHAR(VERT+2,Y+2,5
4,LE)
2190 CALL HCHAR(21,Y+2,55)
2200 FOR I=VERT+2 TO 21
2210 CALL HCHAR(I,HOR+1,P(I)
)
2220 NEXT I
2230 CALL COLOR(3,2,1)
2240 LE=0
2250 LIFE=LIFE-1
2260 FOR I=1 TO 10
2270 CALL SOUND(10*I,110*I,I
)
2280 NEXT I
2290 IF LIFE<1 THEN 2310
2300 GOTO 1810
2310 CALL CLEAR
2320 FOR I=1 TO 8
2330 CALL COLOR(I,2,1)
2340 NEXT I
2350 PRINT "FINALLY YOU WERE
 SHOT BY AN  ENEMY TANK YOU
SCORED":"":SCORE
2360 PRINT "WANT ANOTHER GAM
E(Y/N)?"
2370 CALL KEY(0,K,S)
2380 IF K=89 THEN 290
2390 IF K=78 THEN 2410
2400 GOTO 2370
2410 END
2420 CALL CLEAR
2430 PRINT
2440 PRINT "PROG BY ANDREW L
EES AGE 13"
2450 PRINT
2460 PRINT "YOU ARE  CONTROL
LING A  TANK  THE AIM OF THE
 GAME IS TO SHOOT THE EN
EMY TANKS   AND STOP THEM FR
OM CROSSING THE BRIDGE"
2470 PRINT "PRESS THE SPACE
BAR TO FIRE"
2480 PRINT
2490 PRINT "S MOVES YOU LEFT
& D RIGHT  E MAKES YOU YOUR
 GUN LONGER THEREFORE LE
NGTHENING YOUR  RANGE SO THA
T "
2500 PRINT "YOU CAN HIT THE
HIGHER LANES&X DOES THE OPPO
SITE"
2510 PRINT
2520 PRINT "YOU CAN ONLY FIR
E ONE SHELL PER TANK AND YOU
 HAVE TO HIT THE TURRET.
IF YUO MISS THE ENEMY WILL S
HOOT"
2530 PRINT "LUCKILY YOU HAVE
 THREE LIVES"
2540 PRINT
2550 PRINT "PRESS ANY KEY TO
 BEGIN"
2560 CALL KEY(0,K,S)
2570 IF K>0 THEN 290 ELSE 25
60
```


20
6
21
8
12
14
3
17
22
2
10
15
7
13
18
23
5
11
4
1
9
19
24
16

DLT's MONSTER CHALLENGE



USE YOUR NOGGIN AND WIN £10,000.

You might think you're a computer games wizard . . . I'm pretty good myself. But I've got news for you! I've discovered a second generation of computer games - and they're mind-benders. So if you're a spuddler you might as well turn the page now.

BECAUSE YOU WON'T STAND A CHANCE IN MY TEN-GRAND-SLAM.

If you can cope with a real challenge, try one of my suite of mind-stretching games. If you're really confident buy all six - it's cheaper.

All the games are independent puzzles but each has a clue. Unravel the clues and put them together to solve the riddle. The first 10 who can will be finalists in my

TEN-GRAND-SLAM to win a cool £10,000.

You'll have to be an all-rounder because some of the games will test your intellect, some your general knowledge and one your skill with computers. But they're all fun and I guarantee you've never seen anything like them before.

Games like:

A. Take the Strain - armed only with a compass and a map of Britain's railways, you must end up at the right section with a valid ticket.

B. Air/Sea Missile - taxes not only your usual video skills, but also your mind. Bomb the enemy fleet through thick cloud and shoot down missiles before they shoot you down.

C. Cambridge - take a trip around the city, punt on the Cam, stave off the pangs of hunger and try to reach your destination.

D. Othello - test your powers of logic with this ancient game, playing against each other or against the computer.

E. The Tower - escape from the perils of the tower and obtain the keys to escape from the dungeon.

F. The Quiz - test your knowledge of Britain, playing against each other or the computer in a battle to beat the clock.

TEN-GRAND-SLAM entry instructions will be enclosed with every game purchased.

All Games are suitable for BBC, Dragon and Sinclair home computers.

TO: TWIG SYSTEMS SOFTWARE, 6 HIGH STREET, WENDOVER, BUCKS. ENGLAND.

My Name is: ....

My Address: ....

....

....

I own a computer Make ....

Model ....

Cheque ☐ P.O. ☐ Access ☐ Barclaycard ☐

Access/Barclaycard No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

I wish to purchase the following cassettes
Prices quoted are inclusive of VAT.

A. Take the Strain		....
B. Air Sea Missile	£9.00 each	....
C. Cambridge	or	....
D. Othello	£45.00 for	....
E. The Tower	the set	....
F. The Quiz		....
Post and Packing		1.00
I enclose my total remittance of		£

Warning: These programs are sold according to Twig Systems Software terms of trade and conditions of sale, copies of which are available on request.


STYX
FOR THE ZX SPECTRUM
VIC 20
CHESS
OLDFATHER TIME
COSMIADS
ZX SPECTRUM
SPECTRES
BBC MUSIC SYNTHESIZER
PLUS AUTO-COMPOSER
THE CASTLE
FOR THE ZX SPECTRUM
SCRAMBLE
FOR THE UNEXPANDED VIC 20
CITY DEFENCE
FOR THE 32K BBC MICRO
THE BIRDS AND THE BEES
GALAXY WARS
FOR THE 32K BBC MICRO
GRAPHICS PACK
Spectral INVADERS
VIC PANIC
BUG-BYTE SOFTWARE
Twin Kingdom Valley
IN YOUR HIGH ST. NOW!
BUG-BYTE SOFTWARE
MANIC MINER
SEA LORD
MERRY CHRISTMAS from
BUG-BYTE SOFTWARE
MULBERRY HOUSE,
CANNING PLACE,
LIVERPOOL L1 8JB
☎ 051-709-7071

```
  10 REM Breakout © D.Ross 1983
  11 RANDOMIZE
  12 RESTORE
  15 DEF FN a(x)=LEN (STR$ x)
  16 DEF FN b(x)=(x/2=INT (x/2))
  17 DEF FN c(x)=(x/2<>INT (x/2)
)
  20 DIM h(5): DIM h$(5,10): FOR
a=1 TO 5: LET h$(a)="..........
": NEXT a: BORDER 5: PAPER 7: IN
K 0: FLASH 0: OVER 0: INVERSE 0:
 CLS : REM initialise
  25 LET last=0
  30 GO SUB 9000: REM graphics
  35 BORDER 5
  40 LET sc=0: LET base=5
  50 CLS : PRINT AT 0,2;"Score 0
00 Last 000 Ball 0"
  51 PRINT AT 1,0;"▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀": FOR a=2 TO
17: PRINT AT a,31;"▌": NEXT a:
PRINT AT 18,0;"▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀▀"
  60 PRINT AT 0,20-FN a(last);la
st
  70 OVER 1: PAPER 4: FOR a=0 TO
 31: PRINT AT 0,a;" ";AT 1,a;" "
: NEXT a
  80 FOR a=2 TO 18: PRINT AT a,3
1;" ": NEXT a: FOR a=31 TO 0 STE
P -1: PRINT AT 18,a;" ";AT 19,a;
" ";AT 20,a;" ";AT 21,a;" ": NEX
T a
  90 PAPER 6: FOR a=2 TO 17 STEP
 2: FOR b=0 TO 30: PRINT INK 6;A
T a,b;" ";AT a+1,b;" ": NEXT b:
NEXT a: REM fill play area
 110 REM now draw bricks
 119 LET ball=1
 120 FOR a=20 TO 25: FOR b=2 TO
16 STEP 2: PAPER 5-(21-a): PRINT
 AT b,a;"B";AT b+1,a;"C": NEXT b
: NEXT a
 130 PAPER 0: INK 7: FOR a=20 TO
 25: PRINT OVER 0;AT 18,a;a-19:
NEXT a
 140 PAPER 4: INK 0: OVER 0: PRI
NT AT 0,27-FN a(ball);ball
 141 PAPER 4: INK 0: PRINT AT 20
,5;"Press 'ENTER' to serve"
 142 IF INKEY$<>CHR$ 13 THEN GO
TO 142
 143 PRINT PAPER 4; INK 6;AT 20,
0;"
    "
 145 LET bx=INT (RND*15)+2: LET
by=1: LET ym=1
 146 LET xm=1: IF RND>.5 THEN LE
T mx=-1
 150 PAPER 2
 160 PRINT AT base,0;"D";AT base
+1,0;"E"
 161 LET x$=INKEY$: IF x$<>"7" A
ND INKEY$<>"6" THEN GO TO 170
 162 PRINT PAPER 6; INK 6;AT bas
e+(x$="7"),0;" ": LET base=base+
(x$="6" AND base<16)-(x$="7" AND
 base>2)
 163 PRINT PAPER 2; INK 0;AT bas
e,0;"D";AT base+1,0;"E"
 170 PRINT PAPER 6; INK 1;AT bx,
by;"A"
 180 LET ox=bx: LET oy=by
 190 LET bx=bx+xm: LET by=by+ym
 195 IF oy=0 THEN FOR a=1 TO 10:
 BEEP .01,0: OUT 254,a: NEXT a:
BORDER 5: GO TO 1000
 200 IF bx=1 OR bx=16 THEN LET b
x=ox: LET by=oy: LET xm=-xm: GO
TO 190
 201 IF by=30 THEN LET ym=-ym
 210 IF ATTR (bx,by)=16 AND by=0
 THEN LET ym=-ym: LET by=oy: LET
 bx=ox: GO TO 190
 220 IF ATTR (bx,by)<>54 AND by>
19 THEN BEEP .01,40: LET sc=sc+(
by-19): PAPER 4: PRINT AT 0,11-F
```



BY DANNY ROSS

RUNS ON A SPECTRUM IN 48K

BREA

This is a version of the classic arcade game — turned on its side! The player attempts to knock out as many multi-coloured bricks from a wall on the opposite side of the screen.

The author reckons his version of Breakout is easier to play as you get more time to position the bat in time to hit the oncoming ball.

This version also includes a Hall of Fame feature which can hold up to five top scores. This is displayed at the end of each game. The last competitor's score is also displayed — so you know just what to beat when you are playing against friends.

When the game starts each player gets five balls — these are lost if they get behind the players' bat. The numbers below the row of bricks correspond to the score value of each brick. Each time all the bricks are knocked out the wall rebuilds itself and you get another crack at it — increasing your score.

The program is divided into three main parts. One to set up the screen, another to play the game and the third to update the Hall of Fame.

Part one sets up all the functions needed.
FN a(x): is used when doing fancy scoring, ie 006, 056 etc.
FN b(x): returns 1 if x is even. Used to see which part of a brick was hit.
FN c(x): returns 1 if x is odd.

Part one also sets up the Hall of Fame and calls subroutine to set up the user\defined graphics.

Part two allows you to move your bat and moves the ball according to the x-y directions in xm and ym. The variable xm changes when the ball hits the top or bottom of the screen and ym changes when the ball hits a brick, your bat, or the vertical wall on the right.

Part three tells the player if he or she is in the Hall of Fame and if so, asks the player for a name and stores it along with the score. It also asks if the player wants another game and if so jumps back to line 40.

```
N a(sc);sc: PRINT AT bx,by; PAPE
R 6; INK 6;" ";AT bx+(FN b(bx))-
(FN c(bx)),by;" ": LET ym=-ym: I
F sc/168=INT (sc/168) THEN PRINT
 AT ox,oy; PAPER 6; INK 6;" ": F
OR a=1 TO 3: FOR b=1 TO 40 STEP
5: BEEP .01,b: NEXT b: NEXT a: G
O TO 120
 225 PRINT AT ox,oy; PAPER 6; IN
K 6;" "
 230 GO TO 150
1000 PRINT AT ox,oy; PAPER 6; IN
K 6;" "
1005 LET last=sc
1010 LET ball=ball+1
1020 IF ball<6 THEN GO TO 140
1025 DIM a$(25)
1030 LET a$="Game Over . Press a
ny key"
1035 PAPER 4: INK 0
1040 FOR a=1 TO LEN a$
1050 PRINT AT 20,2+a;a$(a): BEEP
 .05,FN b(a)*10: NEXT a
1060 IF INKEY$="" THEN GO TO 106
0
1070 BORDER 2: PAPER 2: INK 7: C
LS
1080 PAPER 4: INK 0
1090 FOR a=8 TO 5 STEP -1
1100 DIM a$(10+((8-a)*2))
1110 PRINT AT 10-a,a+2;a$
1120 NEXT a
1130 FOR a=6 TO 13: PRINT AT a,7
;a$: NEXT a
1140 PRINT AT 2,13;"HALL"
1150 PRINT AT 3,14;"OF"
1160 PRINT AT 4,11;"{ FAME }"
1165 GO TO 1209
1170 FOR a=1 TO 5
1180 PRINT AT a+5,8;"000 ";h$(a)
: NEXT a
1190 FOR a=1 TO 5: PRINT AT a+5,
11-FN a(h(a));h(a): NEXT a
1195 RETURN
1200 LET last=sc
1209 GO SUB 1170
1210 FOR a=1 TO 5
1220 IF sc<h(a) THEN GO TO 1400
1230 POKE 23658,8: PRINT AT 12,6
;"You equal " AND (sc=h(a));"You
 have " AND (sc>h(a));a;"st" AND
 (a=1);"nd" AND (a=2);"rd" AND (
a=3);"th" AND (a>3): INPUT "Ente
r your name ";x$: GO TO 2000
1400 NEXT a: PRINT AT 12,8;"Hard
 luck .": GO TO 2800
2000 FOR b=5 TO a+1 STEP -1
2010 LET h(b)=h(b-1)
2020 LET h$(b)=h$(b-1)
2030 NEXT b
2040 LET h(a)=sc: LET h$(a)=x$
2050 GO SUB 1170
2800 PRINT PAPER 2;AT 15,8;"PRES
S :-";AT 16,9;"[P]LAY AGAIN";AT
17,9;"[Q]UIT GAME"
2805 POKE 23658,0
2810 LET x$=INKEY$
2820 IF x$="q" THEN BORDER 7: PA
PER 7: INK 0: CLS : GO TO 9999
2830 IF x$="p" THEN BORDER 5: PA
PER 7: INK 0: OVER 0: CLS : GO T
O 40
2840 GO TO 2810
8999 GO TO 9999
9000 REM poke in udg's
9010 FOR a=0 TO 7: READ b: POKE
USR "A"+a,b: NEXT a: POKE USR "B
",255: POKE USR "C"+7,255: FOR a
=USR "B"+1 TO USR "C"+6: POKE a,
129: NEXT a: POKE USR "D",255: F
OR a=USR "D"+1 TO USR "E"+6: POK
E a,1: NEXT a: POKE USR "E"+7,25
5: RETURN
9020 DATA 0,BIN 00111100,BIN 011
11110,BIN 01111110,BIN 01111110,
BIN 00111100,0,0
9999 STOP
```

Illustration: Dorian Cross



NO CHARGE FOR Atari • Commodore 64

NEW ATARI 600XL

A brilliant new computer from Atari. Before you choose a computer, check this specification.



- ★ 16K RAM expandable to 64K with one plug-in pack.
- ★ External processor bus for future CP/M module running CP/M2.2 with its own 64K RAM.
- ★ International character set.
- ★ 256 colours - up to 128 displayable at one time.
- ★ 5 text modes and 11 graphics modes.
- ★ Full-travel typewriter-style keyboard.
- ★ 24K built-in BASIC and operating system.
- ★ 4 special function keys.
- ★ Software compatible with almost all existing software for 400/800.



Atari 600XL Computer (AF77J)	Price £159.95
Extension RAM Pack for 600XL (AF79L)	Price £89.95
Program Recorder (AF80B)	Price £49.95
Disk Drive (AF81C)	Price £269.95
Colour Printer (plain paper) (AF83E)	Price £199.95
Letter-quality Printer (AF82D)	Price £299.95
Joysticks (AC37S)	per pair Price £13.95
Le Stick (AC45Y)	each Price £24.95

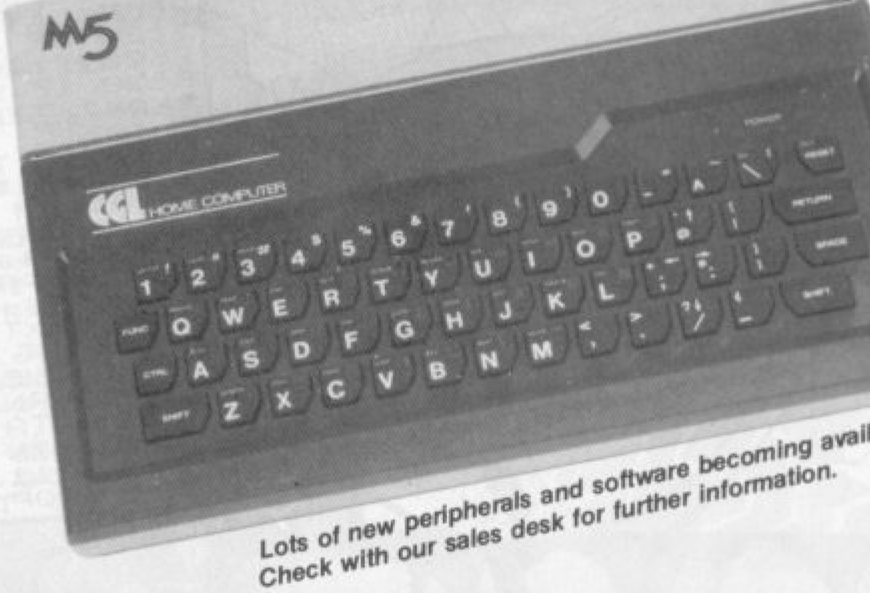
Join the UK Atari Computer Owners Club, an independent user group. Send £3 to Ron, P.O. Box 3, Rayleigh, Essex SS6 8LR for 4 issues of club magazine. Issue 3 now available. State which issue to start subscription.

The Atari 800XL is unlikely to be available before Christmas, but is in any case no different from the 600 XL except all 64K RAM is built inside box.

Check out our huge range of software for Atari. Ask for our free leaflet XH52G.
★ Maplin are an authorised service centre for Atari ★

POWERFUL CGL M5

The M5 contains one of the most powerful colour video processors available. An incredible 32 sprites simultaneously and 16K of RAM dedicated to graphics alone. Driven by the powerful Z80A main processor, there M5 contains three tone generators and a noise generator all with envelope control like a mini-synthesiser. The M5 comes complete with BASIC, superb handbooks for beginners and lead to connect to almost any standard cassette recorder.



CGL M5 computer (AF64U)	Price £149.95
BASIC G - A BASIC with extended and very powerful graphics commands (KS01B)	Price £34.95
Joypads (AF65V)	per pair Price £24.95

Lots of new peripherals and software becoming available now. Check with our sales desk for further information.

If your order contains over £120 worth of computer hardware apply now for credit with no extra charges. Telephone: Mail Order: (0702) 552911; London Shop: 01-748 0926; Manchester Shop: 061-236 0281; Birmingham Shop: 021-356 7292; Southampton Shop: (0703) 25831; Southend Shop: (0702) 554000 or write to P.O. Box 3, Rayleigh, Essex. SS6 8LR.
You pay 10% down, then 10% per month for a further 9 months, (to nearest penny). Example: Atari 600XL. Cash price 159.95. Credit terms £15.95 down, then £16.00 per month for nine months. Total £159.95 which equals the cash price.
Credit quotations on request. This offer subject to approval which may take up to 48 hours or more, and is only open to whose who live on UK mainland and are over 18. Please note that we act as credit brokers for this service.

CREDIT ON (APR = *0%*) COMPUTER HARDWARE
Dragon 32 & CGL M5

COMMODORE 64



- ★ 64K RAM and 20K ROM BASIC and operating system.
- ★ Eight independently movable sprites.
- ★ 16 colours with 255 border/background combinations.
- ★ Nine octave music synthesiser with 3 voices, waveforms, programmable ADSR and filter.
- ★ Full-travel typewriter-style keyboard.

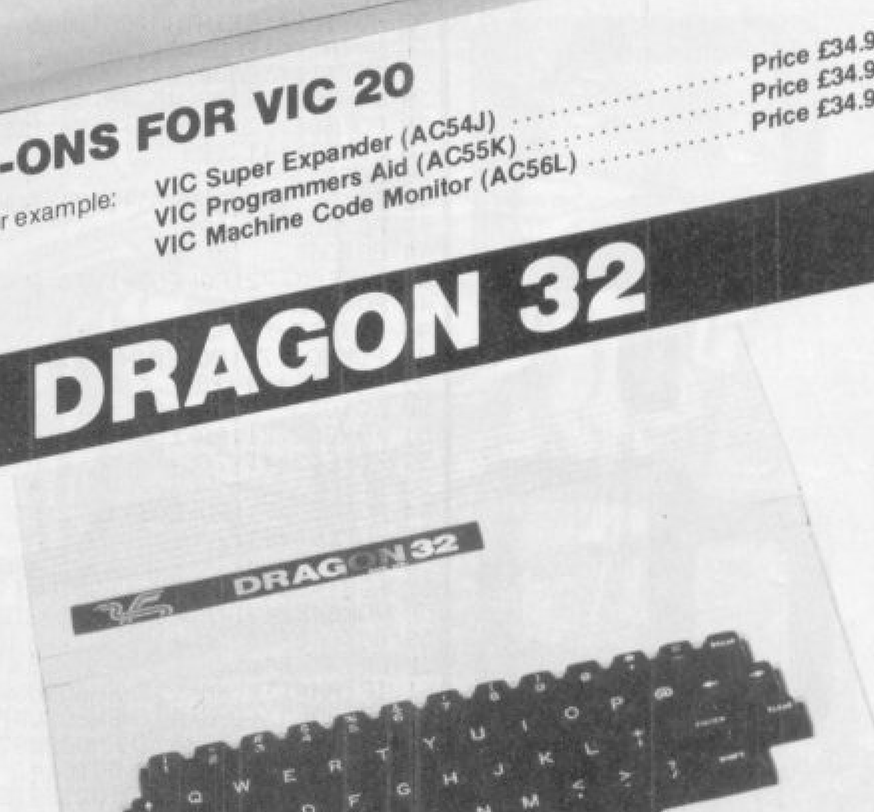
Commodore 64 Computer (AF56L) .. Price £229.00
Cassette Recorder (AF48C) .... Price £44.95
Disk Drive (AF50E) .... Price £229.99
Printer (AF49D) .... Price £230.00
Joysticks (AC37S) .... per pair Price £13.95
Le Stick (AC45Y) .... each Price £24.95

Rapidly expanding range of software for Commodore 64 and VIC 20. Ask for our free leaflet XH52G.

ADD-ONS FOR VIC 20

Expand your VIC 20 from our large range of peripherals and software. For example:
VIC 8K RAM (AF52G) .... Price £29.95
VIC 16K RAM (AF53H) .... Price £39.95
VIC Super Expander (AC54J) .... Price £34.95
VIC Programmers Aid (AC55K) .... Price £34.95
VIC Machine Code Monitor (AC56L) .... Price £34.95

BRITISH-MADE DRAGON 32



- ★ 32K RAM plus Extended Microsoft Colour BASIC in ROM
- ★ Fast 16-bit-structured microprocessor for high speed computing power.
- ★ Full-travel typewriter-style keyboard.
- ★ Can be used with almost any standard cassette recorder.
- ★ Complete with superb BASIC programming course.

Dragon 32 Computer (AF57M) .... Price £175.00
Cassette Cable (BC31J) .... Price £2.95
Disk Drive (AF86F) .... Price £275.00
Joysticks (BC30H) .... per pair Price £14.95

Large range of software available. Ask for our free leaflet XH52G.

MORE EXCELLENT VALUE HIGH QUALITY PRODUCTS

for use with many different home computers
Floppy Disk (YX87U) .... Price £2.50
C12 Data Cassettes (AF61R) ..... Pack of 5 Price £1.99
Dust cover for Atari 400 (BK88V) .... Price £3.95
Dust cover for Atari 800 (BK89W) .... Price £3.95
Dust cover for BBC (BK90X) .... Price £3.95
Dust cover for 64 or VIC20 (BK91Y) .... Price £3.95
Dust cover for Dragon (BK92A) .... Price £3.95
Dust cover for Spectrum (BK93B) .... Price £3.95
Epson RX80 Printer (AF38R) .... Price £339.95
Epson FX80 Printer (AF40T) .... Price £447.35
Mapsoft Catalogue (XH60Q)* .... Price £1.00
Maplin Catalogue (CA01B)* .... Price £1.65



** Available from November 1st 1983. Maplin Catalogue on sale in all branches of W.H. Smith price £1.35.*

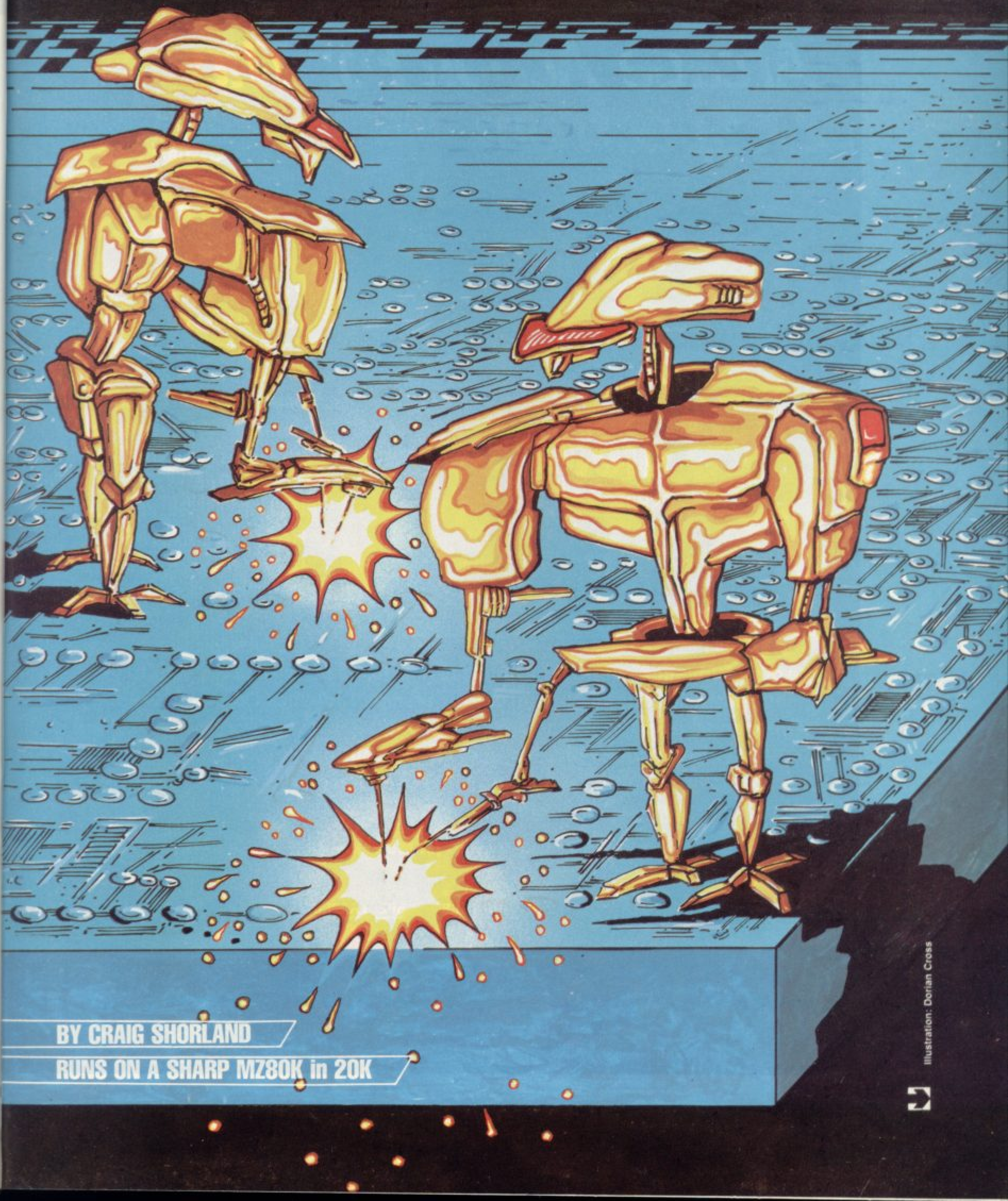
MAPLIN ELECTRONIC SUPPLIES LTD

Mail Order: P.O. Box 3, Rayleigh, Essex SS6 8LR. Tel: Southend (0702) 552911.
Shops at: 159-161 King Street, Hammersmith, London W6. Tel: 01-748-0926.
8 Oxford Road, Manchester. Tel: 061-236-0281.
Lynton Square, Perry Barr, Birmingham. Tel: 021-356-7292.
282-284 London Road, Westcliff-on-Sea, Essex. Tel: 0702 554000.
*46-48 Bevois Valley Road, Southampton. Tel: 0703 25831 *Opens 1st November 1983. All shops closed Mondays
All prices include VAT and carriage. Please add 50p handling charge to orders under £5 total value (except catalogue).

```
1 REM *** Written for FLORRIE BRIARS ***
2 REM ***      by Craig Shorland      ***
3 RESTORE
4 DIMCO$(4),PL$(2),H$(12),HY(9),HV(9,4),SV(4),EE(4):RT=0:CO=0
5 P$="‾B1R2‾B3R2‾B1"
6 FORGG=1TO4:READCO$(GG):NEXTGG
7 PRINT"■■■■";:P=0:POKE10407,0:GOSUB92
8 TEMPO7:PRINT"■";
9 PL=0
10 PRINT"■■■■";:A$="■■■■■■■■■■■■"
11 B$=A$+"■■■■■■"
12 C$="■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■/▒\■■■■▀▀▀■■■■●○●■■■■▀▒▀■■■■▟▀▙"
13 D$=B$+"■■■■■■"
14 F$="■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■    ■■■■    ■■■■    ■■■■    ■■■■    "
15 G$="■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■"
16 H$="■■■■■■■■■■■■■■■■■■■■■"
17 P=0:FORG=1TO6:PRINTG;"-";
18 R=INT(1+8*RND(1)+1):P=P+R:HY(G)=R
19 FORH=1TOR
20 PRINT"### ■■■■### ■";
21 NEXT:PRINT:PRINT:PRINT:NEXT
22 PRINT"■                    CYBORG■■■■■■■‾‾‾‾‾‾‾":GOTO222
23 R1=53406:PL=PL+1:IFPL=3THENPL=1
24 FORRO=1TO3
25 POKER1-1,177:POKER1,67:POKER1+1,178:POKER1+39,66:POKER1+40,122:POKER1+41,86
26 POKER1+79,71:POKER1+80,72:POKER1+81,71:POKER1+119,66:POKER1+120,208
27 POKER1+121,86:POKER1+159,78:POKER1+160,54:POKER1+161,77
28 R1=R1+240:NEXTRO
29 IF(CO=1)*(PL=2)THENGOTO228
30 PRINTG$;SPC(39);G$;"WHICH ROW ";PL$(PL);" ?";:HM=0
31 O1=53485:O2=53725:O3=53965
32 TI$="000001"
33 GETHM:IF(HM<1)+(HM>6)THENGOTO36
34 IFHY(HM)=0THENGOTO29
35 MUSICP$:PRINTHM:GOTO125
36 N=INT(6*RND(1)+1)
37 IF(TI$="000010")+(TI$="000011")THENGOTO177
38 ONNGOTO39,42,45,48,51,54
39 POKEO1,72:POKEO1+1,71:POKEO1+2,72
40 POKEO1+41,109
41 GOTO33
42 POKEO2,72:POKEO2+1,71:POKEO2+2,72
43 POKEO2+41,109
44 GOTO33
45 POKEO3,72:POKEO3+1,71:POKEO3+2,72
46 POKEO3+41,109
47 GOTO33
48 POKEO1,71:POKEO1+1,72:POKEO1+2,71
49 POKEO1+41,208
50 GOTO33
51 POKEO2,71:POKEO2+1,72:POKEO2+2,71
52 POKEO2+41,208
53 GOTO33
54 POKEO3,71:POKEO3+1,72:POKEO3+2,71
55 POKEO3+41,208
56 GOTO33
57 FORI=25TO19STEP-1:GOTO61
58 POKE4514,I:FORJ=255TO0STEP-5:POKE4513,J:USR(68):NEXTJ:NEXTI:USR(71)
59 GOTO80
60 PRINT"■";
61 IF(HM=1)+(HM=2)THENGOSUB68:GOTO58
62 IF(HM=3)+(HM=4)THENGOSUB72:GOTO58
63 IF(HM=5)+(HM=6)THENGOSUB76:GOTO58
64 FORI=19TO25STEP1:GOTO142
65 POKE4514,I:FORJ=0TO255STEP5:POKE4513,J:USR(68):NEXTJ:NEXTI:USR(71)
66 GOTO23
67 PRINT"■";
68 PRINTA$;
69 PRINTF$
70 PRINTA$;C$
71 RETURN
72 PRINTB$;
73 PRINTF$
74 PRINTB$;C$
75 RETURN
76 PRINTD$;
77 PRINTF$
78 PRINTD$;C$
79 RETURN
80 IFHM=1THENR1=53406:GOTO86
81 IFHM=2THENDG=53525:GOTO89
82 IFHM=3THENR1=53646:GOTO86
83 IFHM=4THENDG=53765:GOTO89
84 IFHM=5THENR1=53886:GOTO86
85 IFHM=6THENDG=54005:GOTO89
86 POKER1+1,77:POKER1+81,0:POKER1+121,0:POKER1+161,0:POKER1+160,67
87 POKER1+79,72:POKER1+80,71
88 GOTO113
89 POKEDG,78:POKEDG-118,77:POKEDG+2,0:POKEDG+41,67:POKEDG+42,0:POKEDG-38,0
90 POKEDG-40,72:POKEDG-39,71
91 GOTO119
92 Q=53248:R=53287:S=54208:T=54247:G=67:Z=0
93 IFZ=4THEN103
94 FORX=QTOR:POKEX,G:NEXT
95 FORX=RTOTSTEP40:POKEX,G:NEXT
```

So this is what happens when Robots decide to play a game! Do you want to join them? Then type in this listing. The computer will set up random numbers of counters in six different rows. You select your row and the number of counters to be knocked out. Then the robots come into it! One of the three tin men on the right hand side of the screen will destroy the number of counters you have decided to wipe out.

The winner is the player to take the last counter. Full instructions are included in the program. Dare you take on the robots?



BY CRAIG SHORLAND

RUNS ON A SHARP MZ80K in 20K

Illustration: Dorian Cross

GAME

HUNTER-KILLER

For the 48K ZX Spectrum

Can you Captain a World War II submarine, hunt the enemy then destroy him with your torpedoes?
Realistic simulation including:

★Four high resolution screens
★18 control functions
★Solo or dual computer option
★Quick-kill practice features
★Asdic, radar and depth sounder
★Accurate and realistic chart
★Visible torpedo tracks
★Periscope with raise/lower option and 360° view
★Seabed, destroyer and mine hazards
★3D view of the target
★Enemy air attack
★Live target

Written by Rod Hopkins

£7.95

Sensational new two-computer option. Compatible with Interface 1 and ZX Microdrive



TRADE ENQUIRIES WELCOME

=Protek=

COMPUTING LTD.
1A Young Square, Brucefield Industrial Estate, Livingston, West Lothian. (0506) 415353.

Subject to availability. Prices correct at time of going to press.

Available from John Menzies, Lightning, Computers for all and Leisurebase dealers, and all good computer stores.

```
96 FORX=TTOSSTEP-1:POKEX,G:NEXT
97 FORX=STOQSTEP-40:POKEX,G:NEXT
98 Q=Q+41:R=R+39:S=S-39:T=T-41
99 IFG=67THENG=208:Z=Z+0.5:GOTO93
100 IFG=208THENG=67
101 Z=Z+0.5
102 GOTO93
103 X$="▒▒▒▒▒▒▒▒▒▒▒▒▒▒┌┐    |
104 Y$="▒▒▒▒▒▒▒▒▒▒▒▒▒  ▒ | ▒┌┐ ▒┌┐ ▒┌ ▒┌┐
105 Z$="▒▒▒▒▒▒▒▒▒▒▒▒▒└┘ ▒└┘ ▒└┘ ▒└┘ ▒   ▒└┘
106 ZY$="▒▒▒▒▒▒▒▒▒▒▒▒     __┘            __┘
107 PRINTB$;"▒▒▒▒▒▒▒▒";:PRINTX$:PRINTY$:PRINTZ$:PRINTZY$
108 PRINTH$;"▒▒▒▒▒▒▒▒▒▒▒▒▒▒┌──────────────────┐▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒";
109 PRINTH$;"|CRAIG SHORLAND|▒▒▒▒▒▒▒▒▒▒▒▒by"
110 PRINTH$;"▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒└──────────────────┘"
111 FORBV=1TO54:FORBO=BVTO0STEP-3:POKE4514,BO:USR(68):NEXTBO:NEXTBV:USR(71)
112 FORBV=1TO400:NEXT:PRINT"▒";:GOTO161
113 FORXC=1TOF
114 FORM=20TO30:POKE4514,M:USR(68):NEXTM:USR(71)
115 L=R1-3
116 IFPEEK(L)=163THENGOTO136
117 POKEL,62:L=L-1:POKEL+1,0:GOTO116
118 NEXTXC
119 FORXC=1TOF
120 FORM=20TO30:POKE4514,M:USR(68):NEXTM:USR(71)
121 L=DG-1
122 L=L-1:IFPEEK(L)=163THENGOTO136
123 POKEL,62:L=L-1:POKEL+1,0:GOTO116
124 NEXTXC:GOTO64
125 FORBN=1TO200:NEXTBN:GOTO128
126 FORHJ=1TO500:NEXTHJ
127 TEMPO7
128 PRINTG$;"HOW MANY ?                              ";
129 GETF:IFF=0THEN129
130 IF(F>HY(HM))+(F<1)THENPRINTG$;"STOP MUCKING AROUND , RE-ENTER     "
131 IF(F>HY(HM))+(F<1)THENMUSIC"_CR_CR_CR":GOTO126
132 IF(F>0)*(HY(HM)=0)THENPRINTG$;"STOP MUCKING AROUND , RE-ENTER     "
133 IF(F>0)*(HY(HM)=0)THEN126
134 PRINTG$;"▒▒▒▒▒▒▒▒▒▒▒";F:MUSIC"‾B1R2‾B3R2‾B1"
135 GOTO57
136 POKEL+1,0
137 FORHJ=2TO25:POKE4514,HJ:USR(68):NEXTHJ:USR(71):HY(HM)=HY(HM)-1:P=P-1
138 IF(P=0)*(CO=1)THEN168
139 IFP=0THENPOKEL+40,0:POKEL+39,0:POKEL,0:POKEL-1,0:GOTO168
140 POKEL+40,0:POKEL+39,0:POKEL,0:POKEL-1,0:NEXTXC
141 GOSUB64
142 IF(HM=1)+(HM=2)THENGOSUB68
143 IF(HM=3)+(HM=4)THENGOSUB72
144 IF(HM=5)+(HM=6)THENGOSUB76
145 GOTO65
146 MUSICP$:PRINT"▒▒▒▒▒▒▒▒▒▒ENTER NAME OF PLAYER 1:-          ",,;
147 INPUT"▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒";PL$(1)
148 IFLEN(PL$(1))>10THENPRINT"▒▒▒(Max. 10 letters)":PRINT"▒▒▒▒▒▒▒▒":GOTO146
149 PRINT"▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒DO YOU WISH TO CHALLENGE ME ?":GOSUB270
150 FORCH=1TO200:NEXTCH
151 GETCH$:IFCH$=""THEN151
152 IFCH$="Y"THENCO=1:RETURN
153 IFCH$="N"THENGOTO155
154 GOTO151
155 MUSICP$:PRINT"▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒ENTER NAME OF PLAYER 2:-          ",,;
156 PRINT"▒▒▒▒▒▒▒▒▒▒▒▒▒";
157 INPUT"▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒";PL$(2)
158 IFLEN(PL$(2))>10THENPRINT"▒▒▒(Max. 10 letters)":PRINT"▒▒▒▒▒▒▒▒▒▒▒"
159 IFLEN(PL$(2))>10THENGOTO155
160 RETURN
161 PRINT"▒▒▒▒▒▒▒▒▒▒▒        Do you require Instructions ?"
162 PRINT"                   ________________________"
163 FORWE=1TO200:NEXTWE
164 GETI$:IFI$=""THEN164
165 IFI$="Y"THENPRINT"▒";:GOTO190
166 IFI$="N"THENPRINT"▒":GOTO146
167 GOTO164
168 IFCO=1THENPOKEL+40,0:POKEL+39,0:POKEL,0:POKEL-1,0
169 TEMPO7:MUSIC"‾D3‾#C‾CB#AA#GG#FFE#DD#CC_B_#A_A_#G_G_#F_F_ER4"
170 IFCO=1THENGOTO263
171 PRINT"▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒";PL$(PL);" WINS!!!"
172 PRINT"▒▒▒▒▒▒▒▒▒▒▒▒▒FANCY ANOTHER GAME ?"
173 PRINT"▒▒▒▒▒▒▒▒▒    ____________________"
174 GETV$:IFV$=""THEN174
175 IFV$="Y"THENRUN
176 IFV$="N"THENPRINT"▒";:END
177 DATA"COME ON - WE HAVEN'T GOT ALL DAY"
178 DATA"WE HAVE BETTER THINGS TO DO"
179 DATA"HOW MUCH LONGER WILL YOU BE ?"
180 DATA"THERE IS A LIMIT TO OUR PATIENCE"
181 FH=INT(4*RND(1)+1)
182 RT=RT+1
183 IFRT=4THENPRINT"":PRINTG$;"WILL YOU PLEASE HURRY UP !!!";
184 IFRT=4THENFORQQ=1TO14:POKE57346,0:MUSIC"C0":POKE57346,255:MUSIC"D":NEXTQQ
185 IFRT=4THENRT=0:GOTO187
186 PRINTG$;CO$(FH):MUSICP$
187 FORQL=1TO1400:NEXTQL
188 PRINTG$;SPC(39)
189 GOTO29
```

170 + SPECTRUM GAMES BY MAIL! • FREEPOST SERVICE! • FREE CATALOGUE WITH FIRST ORDER!



Please tick the titles you wish to purchase

Quest: ☐ BLACK HOLE 16K £5.50 ☐ VIOLENT UNIVERSE 16K £5.50 ****** Boss: ☐ TURBO DRIVER 16K £5.95 Elfin: ☐ JAWZ 16K £4.95 ☐ ROAD TOAD 16K £4.95 **** Abersoft: ☐ THE WIZARD'S WARRIORS 48K £4.95 ** DJL: ☐ FROGGY 16K £5.95 ** C-Tech: ☐ KRAZY KONG 48K £5.50 ☐ SUPER CENTIPEDE 16K £5.50 ☐ ROCKET RAIDER 16K £5.95 ☐ FROGGER 16K £5.50 ** Lothlorien: ☐ JOHNNY REB 48K £5.50 ☐ REDWEED 48K £5.50 ☐ PRIVATEER 48K £4.50 *** Quicksilva: ☐ TRADER 48K £9.95 ☐ THE CHESS PLAYER 48K £4.95 ☐ FRENZY 16K £4.95 *** Imagine: ☐ ZZOOM 48K £5.50 ☐ MOLAR MAUL 16K £5.50 ☐ ZIP ZAP 48K £5.50 ☐ AH DIDDUMS 16K £5.50 ☐ JUMPING JACK 16K £5.50 ☐ ARCADIA 16K £5.50 *** Silversoft: ☐ ORBITER 16K £5.95 ☐ GROUND ATTACK 16K £5.95 ☐ STARSHIP ENTERPRISE 48K £5.95 *** Workforce: ☐ WINGED AVENGER 16K £5.00 ☐ JAWS REVENGE 16K £5.95 ☐ DO NOT PASS GO 48K £6.95 *** Lasersound: ☐ HUMMER HOUSE OF HORROR 48K £7.00 ** Arcade: ☐ RAIDER OF THE CURSED MINE 48K £5.50 ☐ GRIDRUN 16K £5.50 *** Postern: ☐ SHADOWFAX 16K £7.99 **************** Bytewell: ☐ HIDDEN CITY 16K £5.95 *** CCS: ☐ DALLAS 48K £6.00 ☐ CORN CROPPER 48K £6.00 CP Software: ☐ SUPER CHESS II 48K £7.95 ☐ ZX DRAUGHTS 48K £5.95 ** CDS: ☐ BOZY BOA 16K £5.95 ☐ 3D PAINTER 16K £5.95 ☐ CATERPILLAR 16K £5.95 ** New Generation: ☐ ESCAPE 16K £4.95 ☐ 3D TUNNEL 16K £5.95 ☐ KNOT IN 3D 48K £5.95 *** Spectrum: ☐ FRENZY 16K £5.90 ☐ ROAD FROG 16K £5.90 *** Titan: ☐ GROUND FORCE ZERO 16K £5.00 **************

Ultimate: ☐ JETPAC 16K £5.50 ☐ PSSST 16K £5.50 ☐ COOKIE 16K £5.50 *** Virgin: ☐ GOLF 48K £7.35 ☐ STARFIRE 48K £7.95 ☐ YOMP 16K £7.95 ****** Blaby: ☐ CHOPPER RESCUE 48K £5.95 ☐ SHUTTLE 48K £5.95 ☐ DODO 48K £5.95 ☐ KILLER KONG 48K £5.95 *** Melb'ne Hse: ☐ TERROR DAKTIL 4D 48K £6.95 ☐ PENETRATOR 48K £6.95 *** Protek: ☐ AIRLINER 48K £5.95 ☐ ROAD-RUNNER 16K £5.95 *** Mikrogen: ☐ MAD MARTHA 48K £6.95 ☐ COSMIC RAIDERS 16K £5.95 *** Rushton: ☐ SPECTRUM SAFARI 48K £5.95 *** P.S.S: ☐ LIGHT-CYCLE 16K £5.95 ☐ GHOST HUNT 16K £4.95 ☐ MAZE DEATH RACE 16K £4.95 *** Shepherd: ☐ EVEREST ASCENT 48K £6.50 ** Neptune: ☐ STAR TREK 48K £5.50 ☐ VELNOR'S LAIR 48K £6.50 *** Sunshine: ☐ ANDROIDS 48K £5.95 and also ☐ CRUISING ON BROADWAY 16K £4.95 ** Softek: ☐ FIREBIRDS 16K £5.95 ☐ JOUST 16K £5.95 ** Pasesoft: ☐ PASEMAN 48K £4.99 ****************** DK Tronics: ☐ DICTATOR 48K £4.95 ☐ 3D TANK 16K £4.95 **** ☐ GOLDMINE 16K £4.95 ********** Hewson: ☐ HEATHROW – AIR TRAFFIC CONTROL ** Procom: ☐ BREAKAWAY... 16K £5.95 *** Artic: ☐ GALAXIANS.. 16K £4.95 ☐ COSMIC DEBRIS 48K £4.95 ☐ 3D COMBAT ZONE 48K £5.95 and also ☐ VOICE CHESS 48K £9.95

AND LOADS MORE.....



CRASH

MICRO GAMES ACTION

SPECIAL INTRODUCTORY OFFER!

(only with this coupon)

£1 off purchase price for 2 cassettes
£2 off purchase price for 3 cassettes

(subtract from the total on the order form)

Please send me your catalog only ☐ I enclose 50p (stamps or P.O.) which I understand will be refunded with my first purchase

No stamps needed! Just use the FREEPOST address below.

*TOTAL ENCLOSED £

(Remember to subtract offer amount)

All prices shown include VAT & postage.

*Please make checks & postal orders payable to CRASH MICRO.

Name	Address	Postcode

CRASH MICRO, FREEPOST (No stamps), LUDLOW, SHROPSHIRE SY8 IBR ☎ 0584 5620

ZX SPECTRUM

JOYSTICK INTERFACE ADAPTOR

£9.95

+

QUICKSHOT JOYSTICK £11.95

=

£19.95

+

48K UPGRADE KIT £22.50

=

£39.95

Send cheque/PO to: Ram Electronics (Fleet) Ltd, (Dept CVG), 106 Fleet Road, Fleet, Hampshire GU13 8PA
or ring us with your Access or Visa card number on (02514) 5858

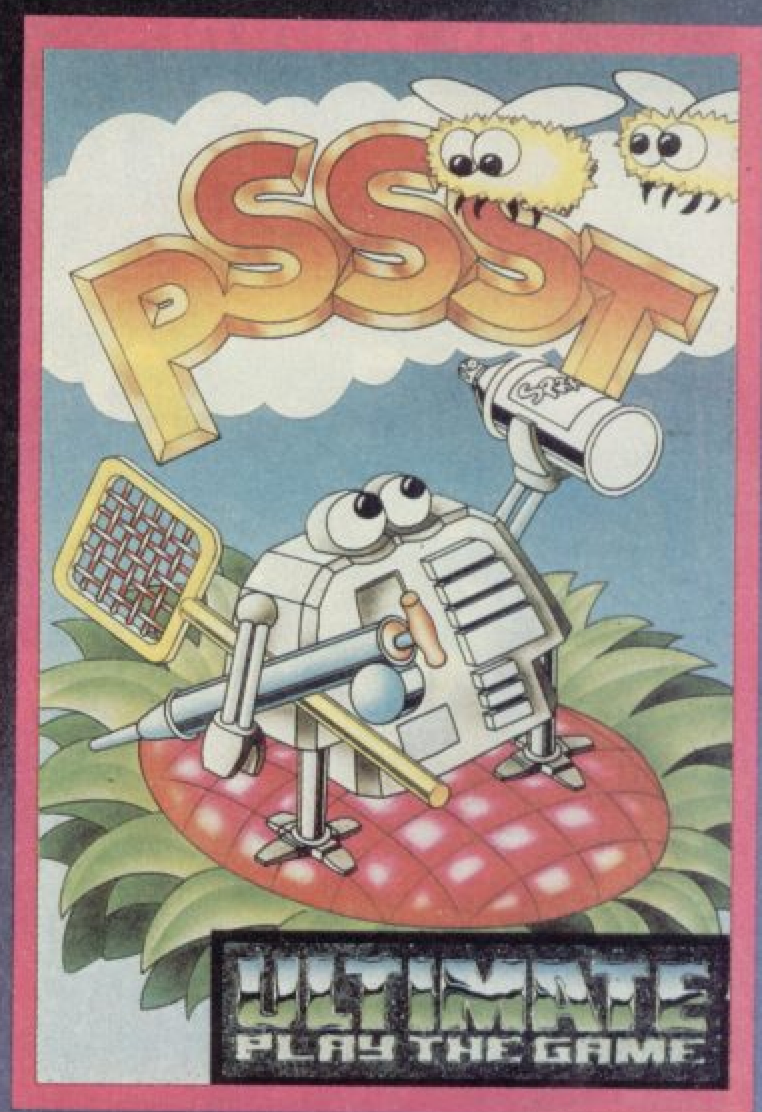
```
190 H$(1)="■                    Instructions"
191 H$(2)="
192 H$(3)="      This is the game of CYBORG."
193 H$(4)="■     It is played by choosing a row"
194 H$(5)="■ in which there is a random number of"
195 H$(6)="■counters. The winner is the player who"
196 H$(7)="■           takes the last piece."
197 H$(8)="■You can either play another humanoid"
198 H$(9)="■    or challenge ME....if you dare."
199 H$(10)="■  After you have chosen the number of"
200 H$(11)="■          counters to be eliminated,"
201 H$(12)="     MY ROBOTS WILL DESTROY THEM !!"
202 FORI=1TO12
203 FORJ=1TOLEN(M$(I))
204 PRINTMID$(H$(I),J,1);
205 IF(ASC(MID$(H$(I),J,1))=32)THENGOTO207
206 JJ=1:POKE4514,JJ:USR(68):USR(71)
207 NEXTJ:PRINT"":NEXTI
208 PRINTTAB(2);"1 ### ### ### ### ###";TAB(36);"/▓\"
209 PRINTTAB(2);"  ### ### ### ### ###";TAB(36);"▀▀▀"
210 PRINTTAB(36);"●O●"
211 PRINTTAB(36);"▀▓▀"
212 PRINTTAB(36);"▟▙■"
213 FORXC=1TO5
214 FORM=20TO30:POKE4514,M:USR(68):NEXTM:USR(71)
215 L=54082
216 IFPEEK(L)=163THENGOTO218
217 POKEL,62:L=L-1:POKEL+1,0:GOTO216
218 POKEL+1,0:FORHJ=1TO20:POKE4514,HJ:USR(68):NEXTHJ:USR(71)
219 POKEL+39,0:POKEL,0:POKEL-1,0:POKEL+40,0
220 NEXTXC
221 FORQL=1TO500:NEXTQL:PRINT"■":GOTO146
222 PRINTG$:"ARE THESE RANDOM ENOUGH ?"
223 GETRE$:IFRE$=""THEN223
224 IFRE$="Y"THENPRINTG$:SPC(39):GOSUB274:GOTO23
225 IFRE$="N"THENPRINT"■■■■";:GOTO17
226 GOTO223
227 REM▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓            ":MUSICP$
228 PRINTG$:"MY MOVE!
229 GOSUB250:FORJ=1TO4:SV(J)=0
230 FORI=1TO6:SV(J)=SV(J)+HV(I,J):NEXTI
231 SV(J)=SV(J)-INT(SV(J)/YY)*YY
232 NEXTJ
233 W=0:FORJ=1TO4:W=W+SV(J):NEXT
234 IFW=0THEN247
235 I=1
236 FORJ=1TO4
237 EE(J)=SV(J)+HV(I,J):EE(J)=EE(J)-INT(EE(J)/2)*YY
238 NEXT
239 EE=8*EE(4)+4*EE(3)+2*EE(2)+EE(1)
240 IF(HY(I)=0)+(EE>=HY(I))THEN245
241 F=HY(I)-EE:HM=I
242 PRINTG$;"I'LL TAKE";F;" FROM ROW";I;".":MUSICP$
243 FORZ=0TO750:NEXT
244 GOTO256
245 I=I+1:IFI<=6THEN236
246 I=1:GOTO236
247 I=INT((6+1)*RND(1))
248 IF(HY(I)=0)+(I=0)+(I>9)THEN247
249 F=1:HV(I)=HV(I)-1:GOTO242
250 YY=2:FORI=1TO6
251 Y1=HY(I)/YY:HV(I,1)=HY(I)-INT(Y1)*YY
252 Y2=Y1/YY:HV(I,2)=INT(Y1)-INT(Y2)*YY
253 Y3=Y2/YY:HV(I,3)=INT(Y2)-INT(Y3)*YY
254 Y4=Y3/YY:HV(I,4)=INT(Y3)-INT(Y4)*YY
255 NEXT:RETURN
256 IFI=1THENHM=1
257 IFI=2THENHM=2
258 IFI=3THENHM=3
259 IFI=4THENHM=4
260 IFI=5THENHM=5
261 IFI=6THENHM=6
262 GOTO57
263 PRINT"■"
264 FORI=53248TO53287STEP2:POKEI,208:POKEI+1,67:NEXTI
265 FORI=53327TO54207STEP80:POKEI,208:POKEI+40,67:NEXTI
266 FORI=54247TO54208STEP-2:POKEI,67:POKEI-1,208:NEXTI
267 FORI=54208TO53248STEP-80:POKEI,208:POKEI-40,67:NEXTI
268 PRINT"■■■■■■■■■■■■■■■■■■■■■SOME OF US HAVE IT"
269 PRINT"■■■■■■■■■■■AND SOME OF US DON'T"
270 PRINT"■■■■■■■■■■■■■■FANCY ANOTHER GAME ?"
271 PRINT"■■■■■■■■■                         "
272 GOSUB281
273 GOTO174
274 N=100
275 FORG=1TO6:V=1:FORC=NTO0STEP-1:POKE4514,C:USR(68):NEXTC
276 N=N-15:NEXTG
277 RETURN
278 B=1:FORA=255TO0STEP-1.5
279 POKE4513,B:USR(68):POKE4513,A:USR(68):NEXTA:USR(71)
280 RETURN
281 FORGH=1TO5:FORHG=255TO1STEP-9:POKE4514,GH:POKE4513,HG:USR(68)
282 NEXTHG,GH:USR(71)
283 MUSIC"C"
284 RETURN
```


THE FABULOUS
CASSETTE
50
FROM
cascade
50 GAMES ON ONE GREAT CASSETTE
ONLY £9-95
DON'T MISS THIS INCREDIBLE OFFER
50 FANTASTIC GAMES ON ONE CASSETTE
ONLY £9.95 (INC.P&P and VAT)
SPECTRUM
50 fabulous games
VIC 20
50 fabulous games
EXPRESS DELIVERY - ORDER NOW
Please send me by return of post, Cassette 50 at £9.95 per tape. I enclose a cheque/postal order for £ made payable to Cascade Games.
Name
Address
Post Code
Country
Dealers & Stockists enquiries welcome.
Please send me (tick appropriate box)
Spectrum
VIC
cascade
Cascade Games,
Suite 4, 1-3 Haywra Crescent,
Harrogate, N. Yorkshire, HG1 5BG.
England.
Telephone: (0423) 504526

JET PAC–
16/48K ZX Spectrum or 8K Expanded VIC 20

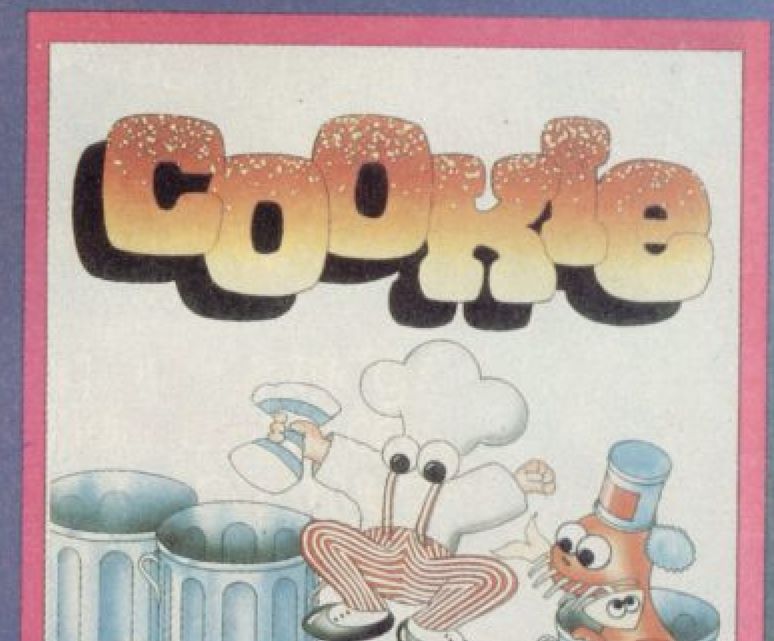


PSSST–
19/48K ZX Spectrum





TRANZ AM–
16/48L ZX Spectrum



COOKIE–
16/48K ZX Spectrum

LUNAR JETMAN –
48K ZX Spectrum



LUNAR JETMAN – For the **48K Sinclair ZX Spectrum.**

LUNAR JETMAN – The **ULTIMATE** Intergalactic **G.A.S. (Graphic Arcade Simulation)** Adventure Space Battle.

LUNAR JETMAN – Arcade standard, 100% machine code, incredible sound effects, amazing smooth high resolution graphics, the totally new addictive concept and all those extra features you expect from the **ULTIMATE** games people.

Design – The **ULTIMATE PLAY THE GAME** design team.

ATIC ATAC – For the **48K Sinclair ZX Spectrum**

ATIC ATAC – The super spooky 3D horror **G.A.S. (Graphic Arcade Simulation)** Adventure game.

ATIC ATAC – Arcade standard, 100% machine code, incredible sound effects, amazing smooth high resolution graphics, the totally new addictive concept and all those extra features you expect from the **ULTIMATE** games people.

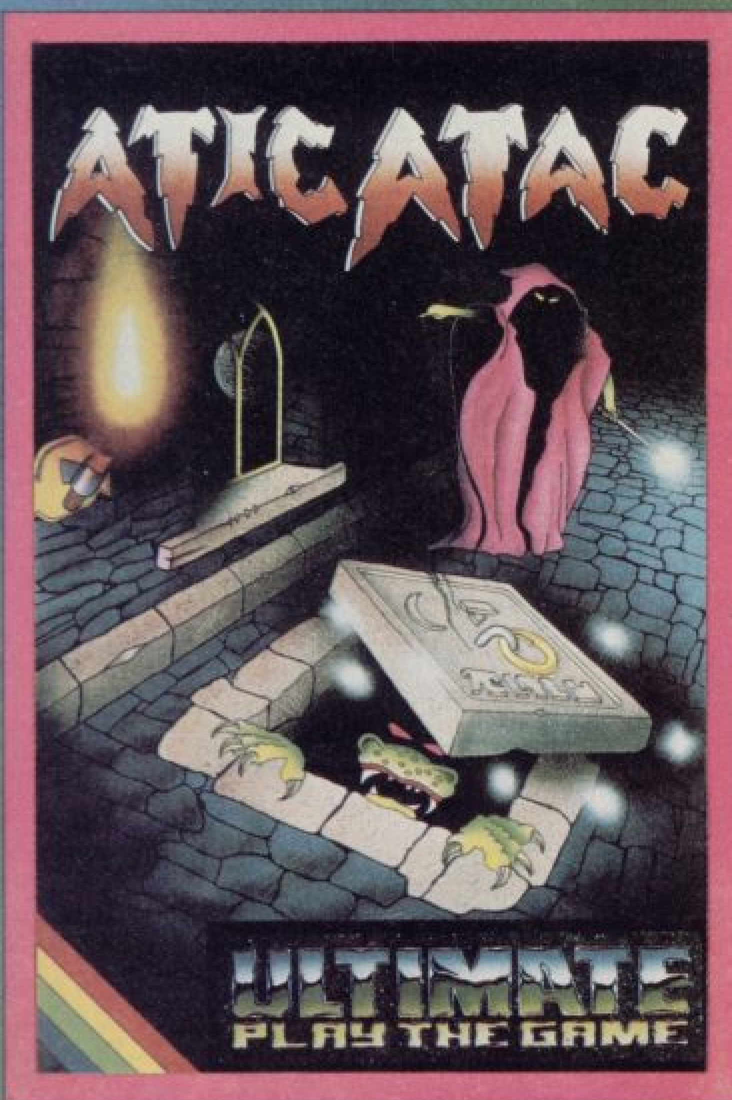
Design – The **ULTIMATE PLAY THE GAME** design team.

£5.50 each, including VAT, first class postage and packing within UK.

These games should be available from
W. H. SMITHS, BOOTS, JOHN MENZIES, LASKYS, SPECTRUM CENTRES, other **large department stores** and all **good major software retailers.** Alternatively, send the coupon to **ULTIMATE PLAY THE GAME** for immediate dispatch by return, subject to availability.

Dealer enquiries welcome, Phone (0530) 411485

ULTIMATE PLAY THE GAME is a Trade name of Ashby Computers & Graphics Ltd., The Green, Ashby de la Zouch, Leics. LE6 5JU.



ATIC ATAC –
48K ZX Spectrum

Post this coupon to:
ULTIMATE PLAY THE GAME, The Green, Ashby de la Zouch, Leicestershire LE6 5JU.
Please rush me the following:

☐ **LUNAR JETMAN** ☐ **TRANZ AM**
☐ **COOKIE** ☐ **JET PAC**
☐ **ATIC ATAC** ☐ **PSSST**
☐ **JET PAC (8K Expanded VIC 20)**

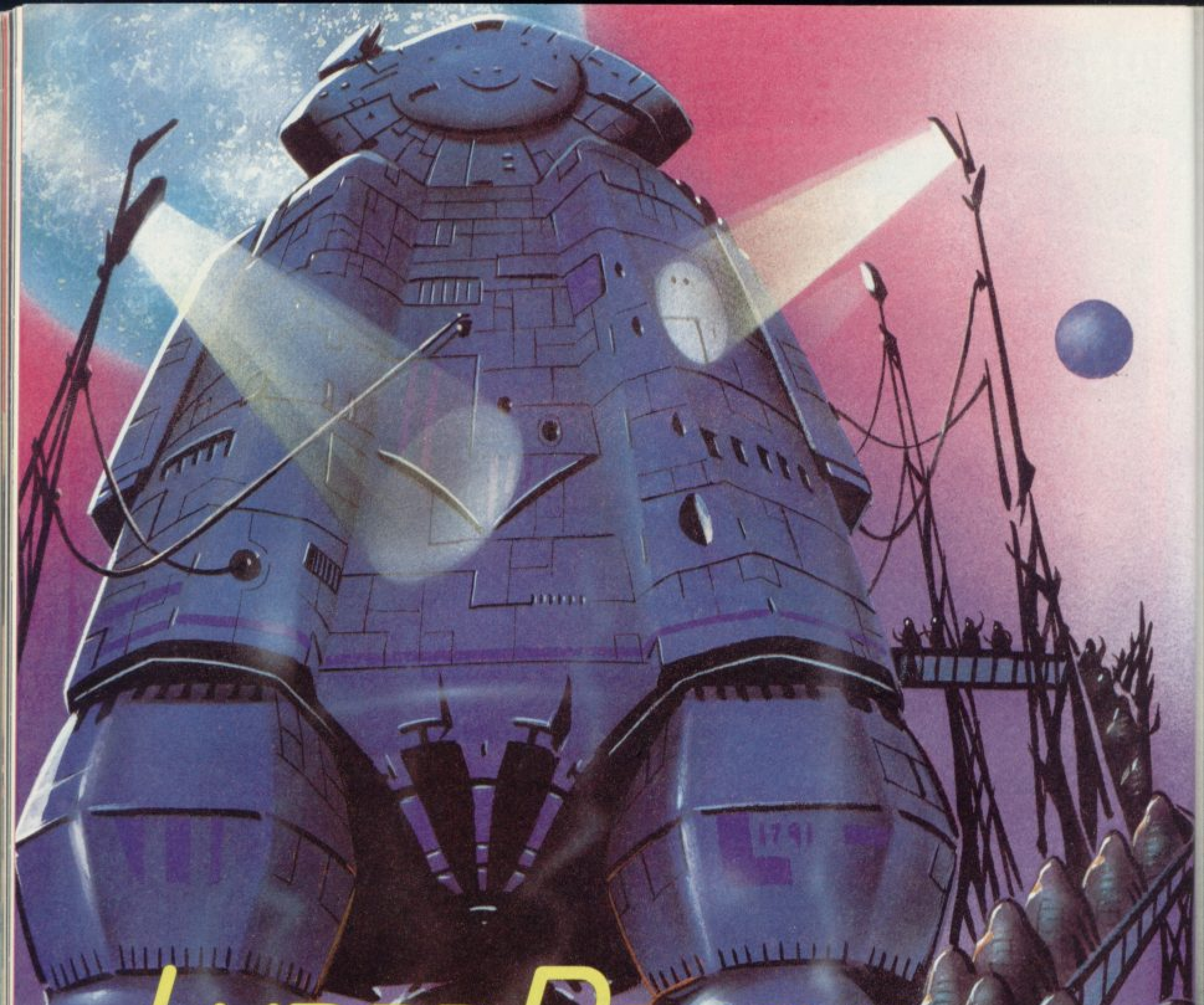
I enclose cheque/PO for £ ....

Name..............................

Address..............................

....

Post Code..............................



Lunar Rescue

Can you save the peaceful people of the planet Noxa from the nasty Trammers? You are the pilot of a space rescue craft and have been given the job of saving the poor Noxanians from their enemies. You provide a shuttle service between the friendly starbase and landing pads on the planets' surface — where the population await to board your craft.

The evil Trammers have created a minefield in the planets' atmosphere so getting in and out is difficult to say the least! Once the landing pads have been used twice they disintegrate — making your life even harder!

Full instructions are included in the program. Happy landings!

Machine Code addresses

1570d — screen scroll to the left routine. Locations 1536 and 1537 contain the high and low bytes for start address for video RAM.

1676d — moves the shuttle automatically up or down without searching the joystick position.

1630 — this moves the shuttle in the corresponding position direction of the joystick.

Locations 208d and 209d have the current address for the player-used indirectly in machine code.

1687 — this byte determines upward or downward movement. A 230d in this location causes downward movement. A 198d causes upward movement. (d=decimal).

Note: Lines 500-530 are a fairly fast method of checking for collisions with the player missile graphics rather than using the slower IF statement.

All the routines for sensing joystick positions, moving the screen left and the movement of player missile graphics are carried out in machine code to ensure a fast game.

Please take care when typing in DATA statements as most of these contain machine code routines and a typing error will cause the whole system to crash when you run the program.

Illustration: John Higgins

```
10 GRAPHICS 17:A=PEEK(560)+256*PEEK(561)
+4:POKE A-1,71:DIM MX(5),MY(5),V(10),W(1
0),PAD(2)
20 PRINT #6;"     LUNAR RESCUE"
30 PRINT #6:? #6;" WOULD YOU LIKE THE"
40 PRINT #6;"     INSTRUCTIONS"
50 ? #6:? #6;"          Y/N":SETCOLOR 0,0,
14
60 OPEN #1,4,0,"K":HS=0
70 GET #1,A:IF A=78 THEN 100
80 IF A=89 THEN 10000
90 GOTO 70
100 GRAPHICS 23:SETCOLOR 0,0,10:SETCOLOR
 1,2,8:SETCOLOR 2,12,14
110 A=PEEK(560)+256*PEEK(561)+4:POKE A-1
,70:POKE 87,1:POKE A+2,6
120 PRINT #6;"SCORE ----------":? #6;
"LIFE 5"
121 DATA 217,30,193,30,173,30,162,30,144
,60,173,60,144,30,162,30,173,30,193,30,2
17,60
122 FOR MUSIC=0 TO 10:READ NTE,DLY:V(MUS
IC)=NTE:W(MUSIC)=DLY:NEXT MUSIC
140 COLOR 1:POKE 87,7
150 FOR C=0 TO 20:PLOT 0,75:DRAWTO C,95:
PLOT 159,75:DRAWTO 159-C,95:NEXT C
160 FOR C=90 TO 95:PLOT 0,C:DRAWTO 159,C
:NEXT C:NS=0
170 FOR C=0 TO 154 STEP 4:PLOT C,89:PLOT
 C+1,89:NEXT C:COLOR 2
180 DATA 30,70,132,2,78,8,84,14,89,157,7
6,151,82,145,87
190 FOR A=0 TO 2:READ X
200 GOSUB 2700
220 NEXT A:COLOR 3
230 FOR A=0 TO 5:READ X,Y:MX(A)=X:MY(A)=
Y:AST=1
```

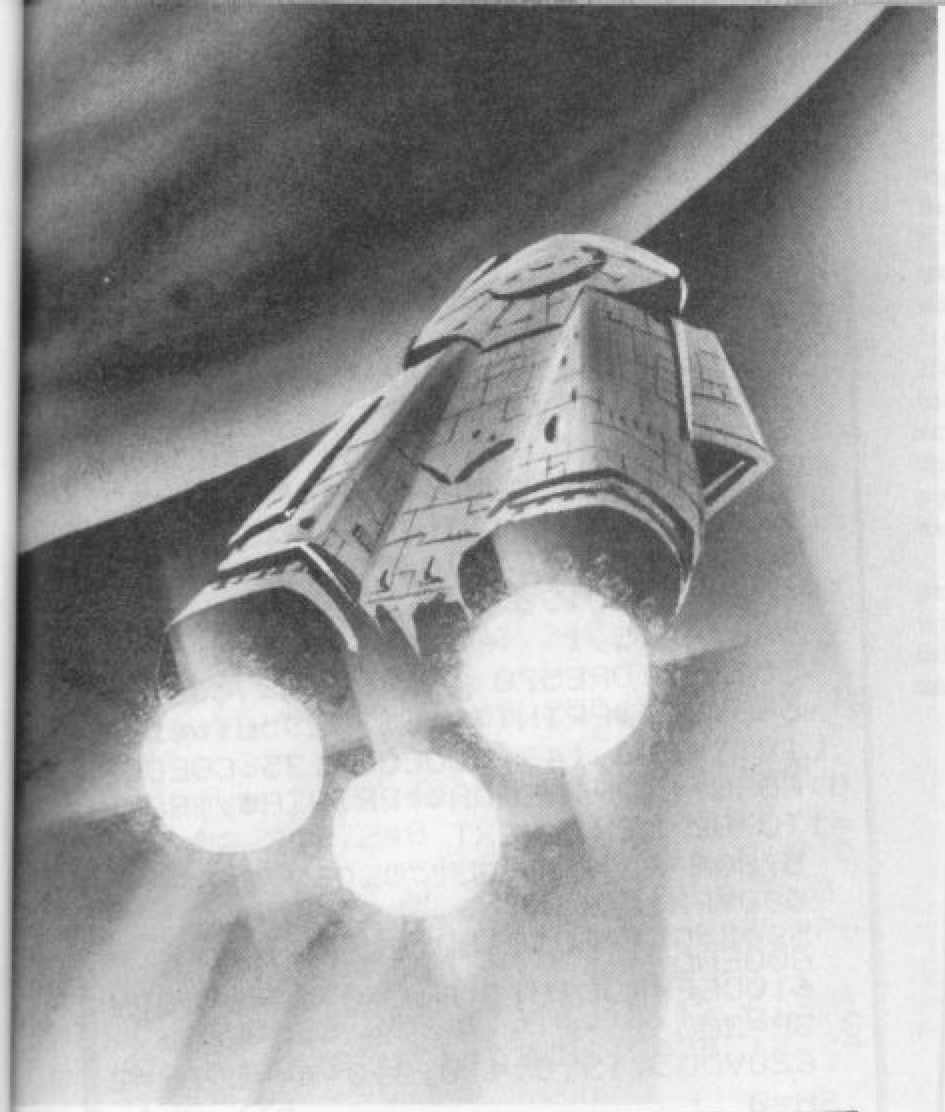


```
240 NS=A:GOSUB 3000:NEXT A:NS=0
250 GOSUB 5000
300 DATA 173,0,6,174,1,6,133,206,134,207
,162,0,160,0,177,206,141,2,6,200,177,206
,136,145,206,200,192,39
310 DATA 208,245,173,2,6,145,206,165,206
,24,105,40,144,2,230,207,133,206,232,224
,45,208,217,104,96
320 FOR A=1570 TO 1622:READ BYTE:POKE A,
BYTE:NEXT A
330 A=PEEK(88)+256*PEEK(89)
340 B=A+(15*40)
350 C=INT(B/256):D=B-(C*256)
360 POKE 1536,D:POKE 1537,C
370 DATA 173,120,2,201,7,208,13,174,5,6,
224,200,240,6,238,5,6,24,144,14
380 DATA 201,11,208,10,174,5,6,224,48,24
0,3,206,5,6,174,5,6,142,0,208,201,13,240
,2,104,96
390 DATA 160,0,169,0,145,208,200,192,7,2
08,249,230,208,160,0,185,10,6,145,208,20
0,192,7,208,246,104,96
400 FOR A=1630 TO 1702:READ BYTE:POKE A,
BYTE:NEXT A
410 A=PEEK(106)-24:POKE 54279,A:POKE 532
77,3:POKE 559,46:POKE 623,1:POKE 705,202
:POKE 706,54
420 Y=23:X=114:PM=(256*A)+512:K=A+2:PF=5
3252:PC=53260:SC=0:LI=5:PT=53262:COLC=53
278
423 FOR CV=0 TO 2:PAD(CV)=0:NEXT CV
425 FOR Z=PM TO PM+512:POKE Z,0:NEXT Z:P
OKE 704,138:POKE 1687,230
430 RESTORE 440:P=0:FOR Z=PM+23 TO PM+29
:READ BYTE:POKE Z,BYTE:POKE 1546+P,BYTE:
P=P+1:NEXT Z
440 DATA 24,36,60,126,102,66,66
450 DATA 24,60,102,231,195,195,129,129,1
29,129,24
460 POKE 53248,114:FOR Z=PM+128+20 TO PM
+128+29:READ BYTE:POKE Z,BYTE:NEXT Z:POK
E 53249,110:POKE 53257,1
470 POKE PM+256+22,24:POKE 53250,110:POK
E 53258,1:POKE 1541,114
480 POKE 208,23:POKE 209,K:POKE 53256,0
490 POKE COLC,0:L=USR(1630):L=USR(1676):
L=USR(1630):L=USR(1570)
500 ON PEEK(PF) GOTO 1000,2000
510 ON PEEK(PC) GOTO HELL,1000
520 ON PEEK(PT) GOTO 6500
530 GOTO 490
1000 FOR A=0 TO 40:POKE 53256,INT(RND(0)
*2):Q=RND(0)*255:Q1=RND(0)*255:SOUND 0,Q
,8,8:SOUND 1,Q1,8,8
1010 POKE 704,A*5:FOR B=0 TO 5:NEXT B:NE
XT A
1020 POKE 704,0:POKE 53256,0:FOR B=8 TO
0 STEP -2:SOUND 0,Q,8,B:SOUND 1,Q1,8,B:F
OR C=0 TO 100:NEXT C:NEXT B
1030 POKE 1687,230:LI=LI-1:IF  NOT LI TH
EN 8000
1040 POKE 87,1:POSITION 5,1:? #6;LI:GOTO
 425
2000 GOTO 2060
2005 POKE 1687,198:GOSUB 2500
2010 L=USR(1676):L=USR(1676):L=USR(1676)
2020 COLOR 0:GOSUB 3000:NS=NS+1
2030 IF NS<6 THEN POKE 704,206:GOTO 490
```


BY DAVID HAYBARTH

RUNS ON AN ATARI 400/800

IN 16K WITH JOYSTICKS

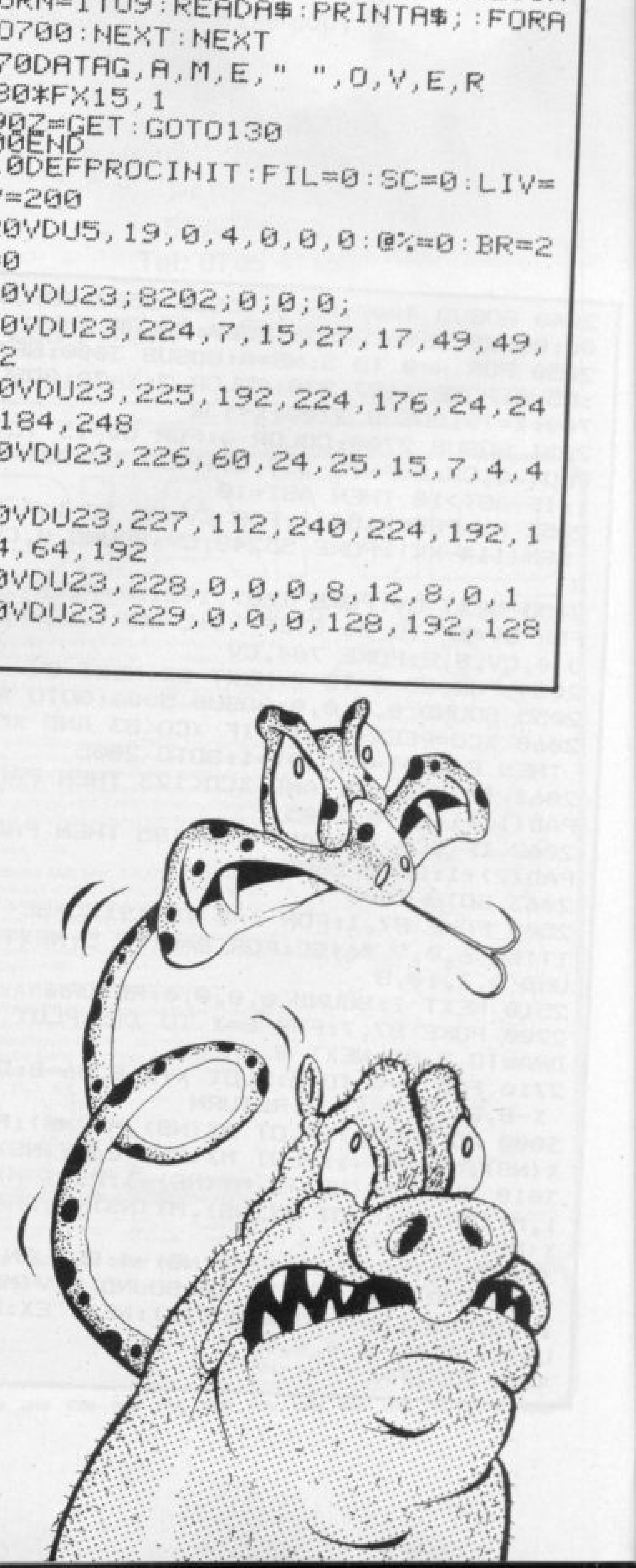


```
2040 GOSUB 4000:NS=0:GOSUB 2500:GOSUB 25
00:GOSUB 2500:GOSUB 2500:COLOR 3
2050 FOR A=0 TO 5:NS=A:GOSUB 3000:NEXT A
:NS=0:POKE 1687,230:COLOR 2:X=30:GOSUB 2
700:X=70:GOSUB 2700:X=132
2051 GOSUB 2700:COLOR 0:FOR CV=15 TO 60:
PLOT 0,CV:DRAWTO 159,CV:NEXT CV:AST=AST+
1:IF AST>10 THEN AST=10
2052 KK=PEEK(1541):FOR CV=KK TO 114 STEP
 SGN(114-KK):POKE 53248,CV:SOUND 0,CV,8,
8
2053 NEXT CV:POKE 1687,198:KK=PEEK(208):
FOR CV=KK TO 23 STEP -1:L=USR(1676):SOUN
D 0,CV,8,8:POKE 704,CV
2054 FOR CB=0 TO 2:NEXT CB:NEXT CV
2055 SOUND 0,0,0,0:GOSUB 5000:GOTO 423
2060 XCO=PEEK(1541):IF XCO<83 AND XCO>72
 THEN PAD(0)=PAD(0)+1:GOTO 2005
2061 IF XCO>111 AND XCO<123 THEN PAD(1)=
PAD(1)+1:GOTO 2005
2062 IF XCO>173 AND XCO<185 THEN PAD(2)=
PAD(2)+1:GOTO 2005
2063 GOTO 1000
2500 POKE 87,1:FOR Z=0 TO 19:SC=SC+1:POS
ITION 6,0:? #6;SC:FOR B=0 TO 5:NEXT B:SO
UND 0,Z,10,8
2510 NEXT Z:SOUND 0,0,0,0:RETURN
2700 POKE 87,7:FOR B=X TO X+5:PLOT B,89:
DRAWTO B,85:NEXT B
2710 FOR B=0 TO 5:PLOT X+5+B,86-B:DRAWTO
 X-B,86-B:NEXT B:RETURN
3000 POKE 87,7:PLOT MX(NS),MY(NS):PLOT M
X(NS),MY(NS)-1:PLOT MX(NS)+2,MY(NS)
3010 PLOT MX(NS)+2,MY(NS)-1:PLOT MX(NS)+
1,MY(NS)-2:PLOT MX(NS),MY(NS)-3:DRAWTO M
X(NS)+2,MY(NS)-3
3020 PLOT MX(NS)+1,MY(NS)-4:RETURN
4000 FOR MUSIC=0 TO 10:SOUND 0,V(MUSIC),
10,8:FOR EX=0 TO W(MUSIC):NEXT EX:NEXT M
USIC:SOUND 0,0,0,0
4010 RETURN
```

```
4100 STOP
5000 COLOR 1:FOR A=0 TO AST
5010 X=INT(RND(0)*150)+5
5020 Y=INT(RND(0)*39)+21
5030 PLOT X,Y:PLOT X,Y-1:PLOT X-1,Y-2:DR
AWTO X+1,Y-2:PLOT X-2,Y-3:DRAWTO X+2,Y-3
5040 PLOT X-1,Y-4:DRAWTO X+1,Y-4:PLOT X,
Y-5:PLOT X,Y-6:NEXT A:RETURN
6500 GOSUB 2500:POKE 1687,230:L=USR(1676
):L=USR(1676):POKE 704,138:L=USR(1676)
6520 IF XCO<83 AND XCO>72 THEN GOTO 6560
6530 IF XCO>111 AND XCO<123 THEN GOTO 65
70
6540 IF XCO>173 AND XCO<185 THEN GOTO 65
80
6550 GOTO 1000
6560 IF PAD(0)=1 THEN GOTO 490
6561 X=30:COLOR 0:GOSUB 2700:GOTO 490
6570 IF PAD(1)=1 THEN GOTO 490
6571 X=70:COLOR 0:GOSUB 2700:GOTO 490
6580 IF PAD(2)=1 THEN GOTO 490
6590 X=132:COLOR 0:GOSUB 2700:GOTO 490
8000 GRAPHICS 18:POSITION 5,2:? #6;"-GAM
E OVER-":POSITION 5,3:? #6;"----- -----"
:POSITION 5,1
8005 POKE 53248,0:POKE 53249,0:POKE 5325
0,0
8010 ? #6;"----- -----":POSITION 3,5:? #
6;"SCORE:";SC:SETCOLOR 0,8,12:SETCOLOR 2
,3,6
8020 IF SC>HS THEN POSITION 3,7:? #6;"NE
W HIGH SCORE!!":HS=SC
8030 PRINT #6;"HIGH SCORE:";HS:GOSUB 400
0
8040 GET #1,KEY:RESTORE :GOTO 100
10000 GRAPHICS 0:SETCOLOR 2,0,0:? "
    LUNAR RESCUE":? "                 ----- --
----"
10010 ? "MISSION:":? "Save the innocent
people on the planetNOXA"
10020 ? :? "There is one problem!(as usu
al)"
10030 ? "The TRAMMERS have laid a minefi
eld in the planets atmosphere,so getting
 out is a little tricky"
10040 ? "Avoid them by--GUESS WHAT--":?
" MOVE OUT THE WAY"
10060 ? "Landing can be done at any spee
d on   the landing pads.Once landing is
    complete ";
10070 ? "docking must be accomplished.Th
is is  done by directing your ship  to t
he red spot in the starbase"
10080 ? "You direct your ship by using t
he     JOYSTICK in PLYR 1 socket"
10090 ? "Pushing the stick down causes t
he shipto thrust in its current directio
n"
10100 ? "PRESS ANY KEY":GET #1,KEY:? "}"
10110 ? "When leaving the planets surfac
e the  ship will be green,showing that a
 man is on board."
10120 ? "When landing,the ship will be b
lue,   showing an empty ship."
10130 ? "NOTE You have NO battle compute
r,so   firing at the mines cannot be don
e."
10140 ? " Once the landing pads have bee
n used twice they will disintigrate due
to   the extreme heat of";
10150 ? " the retro rockets."
10160 ? "PRESS ANY KEY WHEN YOU ARE READ
Y TO   START":GET #1,KEY:GOTO 100
```

```
  80*TV255
  90*FX15
 100HI=0:MODE7:VDU23;8202;0;0;0
;:PRINTTAB(14,10)CHR$134CHR$141"
Q*BILL"'TAB(14)CHR$134CHR$141"Q*
BILL";TAB(11,15);"BY A.Brown 198
3":Z=INKEY(500)
 110*FX15
 120MODE1:PRINTTAB(11,10)"INSTR
UCTIONS?";:A1$=GET$:PROCINIT:IFA
1$="Y"THENCLS:PROCINSTR
 130MODE2:PROCINIT:PROCPYRAMID
 140GCOL0,3
 150*FX9 2
 160*FX10 2
 170*FX11 30
 180*FX12 30
 190MOVE280,600:PRINTQ$
 200*FX15
 210XX=280:YY=600:FIL=0:Z=1:X2=
0:Y2=0
 220T1=TIME+100:BX=600:BY=1000:
MOVEBX,BY:PRINTW$:SX=600:SY=600:
IFSH>1THENMOVESX,SY:PRINTSN$
 230A$="":A$=INKEY$(1)
 240*FX15,1
 250IFA$=""THEN370
 260MOVEXX,YY:PRINTQ$
 270IFA$="Z"THENXX=XX-80:YY=YY-
100
 280IFA$="A"THENXX=XX-160
 290IFA$="D"THENXX=XX+160
 300IFA$="Q"THENXX=XX-80:YY=YY+
100
 310IFA$="E"XX=XX+80:YY=YY+100
 320IFA$="C"XX=XX+80:YY=YY-100
 330SOUND1,1,10,1
 340Z=FNCHECK(XX,YY,0):IFZ=-9TH
EN480
 350PROCFILL(XX,YY):IFFIL>27 TH
EN 440
 360MOVEXX,YY:PRINTQ$
 370IFZ<1THENSOUND1,2,150,1:SOU
ND2,2,100,1:SOUND3,2,60,1:PROCFI
LL(XX,YY):PROCFALL:GOTO520
 380IFTIME<T1 THEN410ELSET1=TIM
E+SP
 390PROCDIR(BR,W$,BX,BY):BX=BX+
X2:BY=BY+Y2:IFFNCHECK(BX,BY,1)=-
9THEN480
 400IFSH>1 PROCDIR(6,SN$,SX,SY)
:SX=SX+X2:SY=SY+Y2:IFFNCHECK(SX,
SY,1)=-9THEN480
 410IFSC+FIL>HI:HI=SC+FIL
 420VDU4:PRINTTAB(0,2)"Sc ";SC+
FIL:PRINTTAB(13,2)"Lives ";LIV;T
AB(0,3)"Sh ";SH+1;TAB(13,3)"HI "
;HI:VDU5
 430GOTO230
 440*FX15
 450FIL=0:FORN=-15TO1:SOUND1,N,
200,1:NEXT:SP=SP-50:CLG:IFSP<1 A
ND BR<6THEN BR=6:SP=100
```

```
 460SH=SH+1:IFSH MOD 5=0 LIV=LI
V+1:SOUND3,1,100,10
 470CLG:PROCPYRAMID:SC=SC+28:GO
TO190
 480MOVEXX,YY:PRINTZZ$:MOVEXX+1
00,YY:GCOL0,8
 490PRINT"!*#@":MOVEXX+100,YY-3
0:PRINT"`+~$"
 500*FX15,1
 510FORJ=1TO5000:NEXT
 520LIV=LIV-1:IFLIV<1 THEN540
 530SC=SC+FIL:CLG:GCOL0,3:PROCP
YRAMID:GOTO190
 540*FX15,1
 550RESTORE570
 560VDU4:PRINTTAB(13,2)"Lives "
;LIV;TAB(5,14);:COLOUR135:COLOUR
6:FORN=1TO9:READA$:PRINTA$;:FORA
=1TO700:NEXT:NEXT
 570DATAG,A,M,E," ",O,V,E,R
 580*FX15,1
 590Z=GET:GOTO130
 600END
 610DEFPROCINIT:FIL=0:SC=0:LIV=
3:SP=200
 620VDU5,19,0,4,0,0,0:@%=0:BR=2
:SH=0
 630VDU23;8202;0;0;0;
 640VDU23,224,7,15,27,17,49,49,
59,62
 650VDU23,225,192,224,176,24,24
,24,184,248
 660VDU23,226,60,24,25,15,7,4,4
,29
 670VDU23,227,112,240,224,192,1
92,64,64,192
 680VDU23,228,0,0,0,8,12,8,0,1
 690VDU23,229,0,0,0,128,192,128
,0,0
```



```
  700VDU23,230,3,7,6,0,0,0,0,0
  710R$=CHR$18+CHR$3+CHR$1:B$=CH
R$18+CHR$3+CHR$3:M$=CHR$18+CHR$3
+CHR$5:C$=CHR$18+CHR$3+CHR$6
  720A$=R$+CHR$224+R$+CHR$225+CH
R$8+CHR$8+CHR$10+R$+CHR$226+R$+C
HR$227
  730S$=B$+CHR$228+B$+CHR$229
  740N$=M$+CHR$230
  750Q$=A$+CHR$8+CHR$8+CHR$11+S$
+CHR$8+CHR$8+CHR$10+N$
  760VDU23,231,15,31,57,109,227,
247,255,255
  770VDU23,232,240,248,252,254,2
55,255,255,255
  780VDU23,233,255,255,255,255,1
27,63,31,15
  790VDU23,234,255,255,255,255,2
54,252,248,240
  800VDU23,235,0,0,6,12,28,8,0,0
  810VDU23,236,0,3,5,15,7,0,0,0
  820VDU23,237,0,128,192,224,176
,48,96,192
  830VDU23,238,1,3,6,12,12,6,3,1
  840VDU23,239,152,36,34,6,12,24
,176,224
  850W$=C$+CHR$231+C$+CHR$232+CH
R$8+CHR$8+CHR$10+C$+CHR$233+C$+C
HR$234
```

Variables

XX,YY:Q*Berts co-ordinates.
BX,BY:co-ordinates of ball.
SX,SY:co-ordinates of snake.
T1:TIME COUNTER.
SP:speed of ball.
Fil:number of squares filled so far.
SC:overall square score.
SH:sheet number.
HI:highscore.
LIV:lives left.
Q$:Q*Bert character.
SN$:snake character.
W$:ball character.

This little chap has been turning the air blue — and pyramids various assorted colours — in the arcades for some time now. But now the cursing Q*Bert has been cleaned up for the BBC B by enterprising author Andrew Brown. Just like the arcade game of the same name you have to help Q*Bert change the colour of a pyramid built out of cubes. He does this by leaping from cube to cube using his amazing jumping powers. However, there are hazards which plague Q*Bert — like a giant beach ball which bounces around after him and in later screens there's Coily the snake to contend with. Also the ball speeds up as you get better at the game and conquer more pyramids. You get three lives and to start with — and an extra life after every sixth screen.

You won't get past the third screen without a lot of practice. So if you want that extra life to come a bit sooner why not change the 5 in line 460 to a smaller value. The initial speed of the ball is set in line 610 (variable SP). Make it smaller (in units of 50) to make it go faster.

RUNS ON A BBC B IN 7K

BY ANDREW BROWN





Illustration: Dorian Cross

MR CHIP SOFTWARE

SPECTRUM GAMES

SPECTRUM DARTS (48K)
Five games of darts for 1-5 players, 501, Cricket, Killer, Round the board, Noughts and Crosses, four levels of play per game, take on the computer or friends at these games of skill and judgement **£5.50**

WH££LER DEALER
As for the Commodore 64, but now available for the 48K Spectrum, Texas T.I.99/4A and Dragon ....: **£5.50**

VIC 20 GAMES AND UTILITIES

JACKPOT
This is it, the ultimate Fruit Machine for the VIC with nudge, hold and respin 100% machine code. "Overall Jackpot is a beautifully written simulation giving superb graphics, animation and use of colour. In fact, this program makes Commodore's Fruit Machine cartridge look unbelievably cheap and nasty." Home Computing Weekly No. 20 19/7/83 .... **£5.50**

KWAZY KWAKS
Accuracy and speed are required for this Shooting Gallery, superb use of colour and graphics in this new and challenging game from the author of **Jackpot**. 100% machine code, joystick or keyboard control **£5.50**

PACMANIA
Choose your own game from the following options — difficulty 1-3, speed 1-3, size of maze 1-3, visible or invisible maze, still or moving power pills, define your own key controls, any combination, if this is your type of game, then this is the one for you, for the 3K expand. VIC **£5.50**

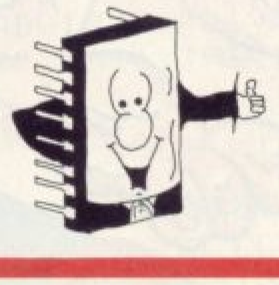
SNAKE BYTE
Guide your ever hungry snake round the screen, eating the flies and wasps, to stay alive you must avoid the deadly mushrooms, quick reactions are required for this biting game, keyboard control, for the unexpanded VIC **£5.50**

BUGSY (Joystick Only)
This is a Minefield with a difference as you step on the stones whilst collecting purple boxes which give you both time and points, they disappear from beneath your feet. DO NOT DESPAIR! "BUGSY" will randomly replace the stones but avoid bumping into him or its sudden death! An original compulsive and challenging game. **£5.50**

MINI-ROULETTE — PONTOON — HI-LOW
Three great games of chance for the VIC, try to beat the computer, hours of fun, full colour, sound effects and tunes **£5.50**

DATABASE— create your own files and records on tape **£7.50**

SUPER BANK MANAGER — A full feature version, any memory size, but needs 3K expansion **£7.50**



COMMODORE 64 GAMES AND UTILITIES

JACKPOT 64: At last its here, specially written for the 64, by the author of "JACKPOT" the ultimate Fruit Machine program for the VIC **£5.50**
(available from 1st Nov.)

WESTMINSTER
A game for up to four players, can you lead the party of your choice and win the general election, you tour the 60 constituencies (seats) buying votes, when you can, (just like the real thing), this must be one of the first board type games specifically written for the computer. Why play on your own, have fun with your family and friends playing WESTMINSTER **£5.50**

RED ALERT: A game for 1-4 players, with sound and graphics, make money in casinos, commit robbery, hide from the police, hire secret agents, (some of whom can be treacherous), negotiate for weapons, find and attack the secret rocket base to launch the missile, and watch the havoc and destruction caused. There's no turning back from "RED ALERT" (available from 1st Nov) ... **£5.50**

WH££LER DEALER
A game for two to twenty players, become a tycoon of the motor trade, you must obtain gearboxes, tyres and engines to produce cars for sale. Form syndicates, buy and exchange parts, buy dealerships, but be careful, you may become bankrupt and have to liquidate, find out what you are made of, have you got what it takes to become a WH££LER DEALER **£5.50**

LUNAR RESCUE
Our new version, avoid the asteroid belt, to rescue the stranded scientists, then fight your way back to the mother ship, fast reactions are required to safely land and dock your lunar module **£5.50**

CHIPMON: Contains a one- or two-pass Assembler, Disassembler and Monitor. A programming aid for the development of machine code programs and routines on the CBM 64.. **£12.50**

BANK MANAGER — As our Super Bank Manager, but for the 64 .... **£7.50**
Now available on disc with added facilities **£10.00**
Full documentation with all utility programs.

PURCHASE LEDGER: Easy to use, single entry, handles 400 invoices per month, Gross/Nett purchases, V.A.T.
.... **£14.50**
Disk Version **£17.00**
(available from 1st Nov.)
SALES LEDGER: As above **£14.50**
Disk.. **£17.50**

Other software available for the VIC and Commodore 64, send for free brochure, including RABBIT SOFTWARE at £5.00 each.

Send Cheques/PO's to:

MR. CHIP SOFTWARE

Dept CVG, 1 NEVILLE PLACE,
LLANDUDNO,
GWYNEDD LL30 3BL. Tel: 0492 49747

Wanted: High quality software,
of all types, for export and UK distribution
All programs now available on disc please allow
£2.50 extra.

DEALER ENQUIRIES WELCOME

```
   860E$=CHR$18+CHR$3+CHR$7+CHR$2
35
   870W$=W$+CHR$8+CHR$8+CHR$11+E$
   880SN$=M$+CHR$236+M$+CHR$237+C
HR$8+CHR$8+CHR$10+M$+CHR$238+M$+
CHR$239
   890ENVELOPE1,1,12,8,2,4,2,2,12
6,0,0,-10,126,126
   900ENVELOPE2,8,10,6,-1,0,0,255
,109,-1,0,-1,126,126
   910ENDPROC
   920DEFPROCPYRAMID:LOCAL Q,W,X,
Y
   930Q=580:W=580
   940FORY=900TO300 STEP-100:FORX
=Q TO W STEP160:PROCBOX(X,Y):NEX
T:Q=Q-80:W=W+80:NEXT:ENDPROC
   950DEFPROCBOX(X,Y)
   960MOVEX,Y:PLOT1,-80,-50:PLOT1
,80,-50:PLOT1,80,50:PLOT1,-80,50
:PLOT0,80,-50:PLOT1,0,-50:PLOT1,
-80,-50:PLOT1,0,50:PLOT0,0,-50:P
LOT1,-80,50:PLOT1,0,50:ENDPROC
   970DEFPROCFILL(X,Y):IFPOINT(X+
60,Y-20)<>0 THENENDPROC
   980IFZ<1 THEN GCOL0,0:GOTO1000
   990GCOL0,3:FIL=FIL+1
  1000MOVEX+60,Y:PLOT1,-80,-50
  1010PLOT81,80,-50:PLOT1,80,50:P
LOT85,X+60,Y
  1020ENDPROC
  1030DEFFNCHECK(X,Y,F):IFY<300TH
EN:=-1 ELSE IF Y>900THEN:=-2
  1040IFSH>1ANDSX=XX AND SY=YY TH
EN:=-9
  1050IFBX=XX AND BY=YY THEN:=-9
  1060IFF=1:IF(SX+X2=BX AND SY+Y2
=BY)OR(BX+X2=SX AND BY+Y2=SY)THE
N:=0
  1070ON ((Y DIV 100)-2)GOTO1080,
1100,1120,1140,1160,1180,1200
  1080IFX<0 ORX >1150 THEN:=0
  1090=1
  1100IFX<0 OR X>1079 THEN:=0
  1110=1
  1120IFX<50 OR X>999 THEN:=0
  1130=1
  1140IFX<121 OR X>919 THEN:=0
  1150=1
  1160IFX<201 ORX>830THEN:=0
  1170=1
  1180IFX<290 ORX>750THEN:=0
  1190=1
  1200IFX<370 ORX>670 THEN:=0
  1210=1
  1220DEFPROCDIR(RAN,ZZ$,X1,Y1)
  1230D=RND(RAN):X2=0:Y2=0
  1240IFD=1 X2=80:Y2=-100
  1250IFD=2 X2=-80:Y2=-100
  1260IFD=3 X2=-160
  1270IFD=4 X2=-80:Y2=100
  1280IFD=5 X2=80:Y2=100
  1290IFD=6 X2=160
  1300Z1=FNCHECK(X1+X2,Y1+Y2,1)
  1310IFZ1=0OR((Z1=-1ORZ1=-2) AND
RAN>2)THEN1230
  1320MOVEX1,Y1:PRINTZZ$
  1330X1=X1+X2:Y1=Y1+Y2:MOVEX1,Y1
:PRINTZZ$
  1340IFZ1=-1:MOVEX1,Y1:PRINTZZ$:
X1=600:Y1=1000:MOVEX1,Y1:PRINTZZ
$:X1=600:Y1=1000:X2=0:Y2=0:BX=60
0:BY=1000
  1350ENDPROC
  1360DEFPROCFALL:MOVEXX,YY:PRINT
Q$
  1370FORN=YY TO -10 STEP-100
  1380MOVEXX,N:PRINTQ$:FORG=1TO10
0:NEXT
  1390MOVEXX,N:PRINTQ$:NEXT:ENDPR
OC
  1400DEFPROCINSTR
  1410X3=10:Y3=1000
  1420RESTORE1550
  1430READA1$:IFA1$="END"THENZ=GE
T:RESTORE:ENDPROC
  1440IFA1$="CLR"THENZ=GET:CLS:X3
=10:Y3=1000:GOTO1430
  1450PROCJUMP:GCOL0,3:MOVEX3+100
,Y3:PRINTA1$
  1460GOTO1430
  1470DEFPROCJUMP
  1480MOVEX3,Y3:PRINTQ$
  1490FORJ=1TO6:MOVEX3,Y3:PRINTQ$
:X3=X3+.25:Y3=Y3+5:MOVEX3,Y3:PRI
NTQ$:NEXT
  1500MOVEX3,Y3:PRINTQ$
  1510FORY3=Y3 TO Y3-59 STEP-14
  1520MOVEX3,Y3:PRINTQ$:FORD=1TO1
00:NEXT:MOVEX3,Y3:PRINTQ$:NEXT
  1530SOUND1,1,10,1
  1540ENDPROC
  1550DATA1.Guide Q*BILL around t
he pyramid,filling in the tops a
s you go.
  1560DATA,,,2.Watch out for the
ball which,decends slowly at fir
st.But speeds,up gradually.
  1570DATA,,,3.On the third scree
n a snake will,be introduced.Thi
s will not chase,you but will mo
ve all over the,pyramid.
  1580DATA,,,4.Do not try to jump
 off of the,pyramid as this will
 prove,fatal for Q*BILL.
  1590DATA,,CLR
  1600DATA5.On the fifth screen t
he ball will,start to move like
the snake.
  1610DATA,,,6.You have three liv
es and you,will get an extra lif
e,every six sheets.
  1620DATA,,,7.TO MOVE USE,,"
 Q\  /E","      A-  -D","      Z/
 \C",,,,"      PRESS A KEY TO STA
RT",,
  1630DATAEND
```

sinclair special

5



Inside...
New Interface 2 and ROM cartridges!
New Software!

SOFTWARE UPDATE

The latest cassette software for ZX® Computers

TAKING NEW SOFTWARE IN NEW DIRECTIONS

You'll see that this issue of Sinclair Special devotes considerable space to software.Why, when we've so much to say about hardware and peripherals? Simply because at Sinclair we believe in supporting first-class hardware with first-class software.

This month sees the start of a new commitment to education in our catalogue, both for adults and children.

In the field of micro theory, we've programs like Beyond BASIC and Make-a-Chip, which take you from the creation of simple ZX® assembler subsets to simulated circuit design projects.

There's Musicmaster, to teach you music terminology, note values and composition.

And if you're keen to beat your Spectrum at chess (which can be hard), you'll certainly want to try Chess Tutor 1, the first program in a complete chess masterclass.

Coming soon...

In the pipeline are many new releases, some of which break completely new ground. LOGO and micro-PROLOG for instance. They're fifth generation languages which will take you and your Spectrum closer than ever before to the creation and application of artificial intelligence.

A formal agreement between Sinclair and Macmillan Education has been announced, the first results of which will be published this autumn. These consist of five programs in a complete early reading course plus the first four of a series of programs based on Macmillan's top selling Science Horizons Scheme. All programs are designed for use in schools or the home.

And with Blackboard software, we're publishing six more home education programs for primary school children. Covering alphabet, spelling and punctuation, each of these programs is a true gem, unlike any other education software, and fascinating to run. Even for adults!

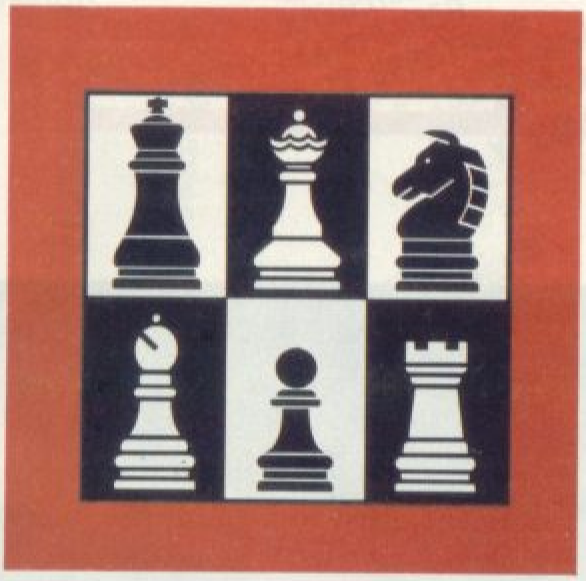
I believe that these new titles represent a major advance in educational software for the home.

New ROM software too!

You may well have heard news of ZX Interface 2® and ROM cartridge programs. You'll find full details of the Interface and its software on the facing page (and there's an order form on the back page too!). These offer an instant games playing facility at unbeatable prices, and expand the possibilities of using your Spectrum in yet another direction.

Alison Maguire

Alison Maguire
Applications Software Manager



Chess Tutor 1
For 48K RAM Spectrum. **£9.95.**

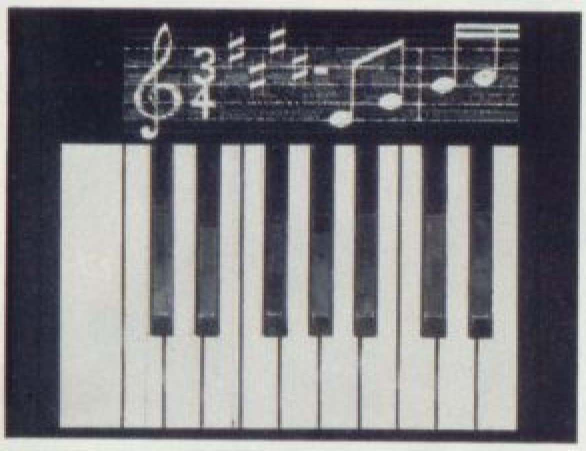
Chess Tutor is a new way of learning all about chess – using your ZX Spectrum.®

It starts from the beginning by teaching you about the chess pieces and the way they move – including castling, en passant, promotion, check, checkmate, stalemate and perpetual check.

Then it teaches you the basic tactics – pins, forks, double attacks and skewers.

There are over 120 exercises and over 200 questions for you to answer – with demonstrations and hints from your ZX Spectrum when you want them.

You can choose which parts of the course you want – and even experienced players may be surprised at what they can learn from Chess Tutor.

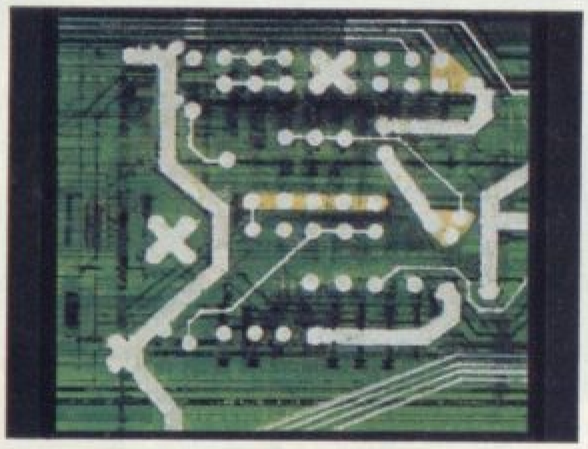


Musicmaster
For 48K RAM Spectrum. **£9.95.**

Musicmaster turns your ZX Spectrum into a musical instrument which will not only play tunes, but will also demonstrate key signatures, durations of notes, and scales.

You can write your own tunes – in any key – play them over and over again, save them on tape, modify them.

You can either write your music on a stave, or place a simple overlay on your Spectrum for a 17-note keyboard.



Make-a-Chip
For 48K RAM Spectrum. **£9.95.**

Make-a-Chip teaches you the basic elements of circuit design, shows you how they fit together, and then lets you design and test your own circuits.

When you have designed a circuit, you can give it inputs and outputs and your ZX Spectrum will check it for you. Then it will run it, or tell you what's wrong so that you can modify it.

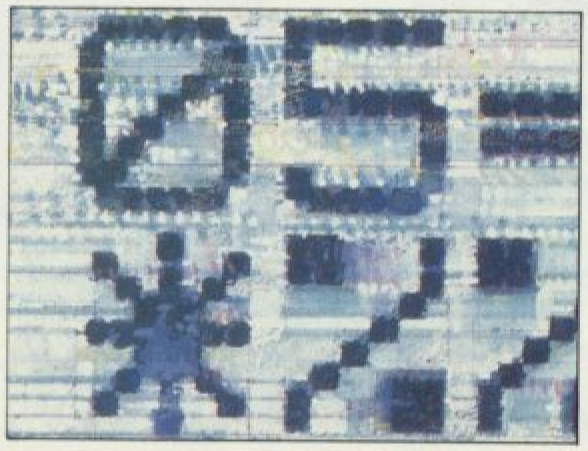
Make-a-Chip is a fascinating way of finding out how computer logic works.



Print Utilities
For 16K and 48K RAM Spectrum.
£9.95.

Increase the printing and display facilities of your ZX Spectrum with the Print Utilities program.

Print Utilities enables you to enhance your programs by generating characters of eight different sizes which you can place anywhere on your screen.



Beyond BASIC
For 48K RAM-Spectrum. **£9.95.**

Takes the agony out of assembler. Takes the mystery out of machine code.

Beyond BASIC gives you a deeper insight into the workings of your ZX Spectrum. It explains what happens inside your micro when you run a program, and it teaches you simple Z80 machine code programming.

A major feature of Beyond BASIC is that it enables you to write your own Z80 assembler programs – then you can actually see on your screen how they affect the ZX Spectrum memory and registers.

ZX MICRODRIVE





NOW ON RELEASE

The ZX Microdrive® System – as you'd expect from Sinclair – is unique to the world of computing. It's a compact, expandable add-on system which provides high-speed access to massive data storage. With just one Microdrive alone (and Interface 1), you'll have at least 85K bytes of storage, the ability to LOAD and SAVE in mere seconds, the beginnings of a local area network of up to 64 Spectrums, *and* a built-in RS232 interface! The cost? Less than £50 for each Microdrive.

How to get ZX Microdrive

Spectrum owners who bought direct from us, by mail order, have been sent full details. Order forms are being mailed in strict rotation, so if you haven't yet received your order form please bear with us. We're making good progress in meeting the huge demand.

If you didn't buy your Spectrum by mail order, don't worry. Send us the form from the bottom of this page. We'll add your name to the mailing list, and send you details by return.

Each Microdrive costs £49.95. Interface 1 costs £49.95, but just £29.95 if purchased with a ZX Microdrive. Extra ZX Microdrive cartridges: £4.95.

How to order

Simply fill in the relevant sections on the order form below. Note that there is no postage or packing to pay on some purchases. Orders may be sent FREEPOST (no stamp needed). Credit card holders may order by phone, calling 01-200 0200, 24 hours a day. 14-day money-back option, of course. Please allow 28 days for delivery.

®ZX, ZX Spectrum, ZX Interface and ZX Microdrive are all registered trade marks of Sinclair Research Ltd.

sinclair®

Sinclair Research Ltd, Stanhope Road, Camberley, Surrey, GU15 3PS. Telephone: (0276) 685311.

To: Sinclair Research Ltd, FREEPOST, Camberley, Surrey, GU15 3BR.

ORDER FORM

Section A: Hardware

Qty	Item	Code	Item Price £	Total £
	ZX Interface 2	8501	19.95	
	ZX Spectrum – 48K	3000	129.95	
	ZX Spectrum – 16K	3002	99.95	
	Postage and packing: orders under £90	0028	2.95	
	orders over £90	0029	4.95	
			TOTAL £	

Section B: Software **ROM CARTRIDGE PROGRAMS**

Qty	Item	Code	Item Price £	Total £
	G12/R Planetoids	5302	14.95	
	G9/R Space Raiders	5300	14.95	
	G13/R Hungry Horace	5303	14.95	
	G24/R Horace and the Spiders	5305	14.95	
	G28/R PSSST	5307	14.95	
	G30/R Cookie	5309	14.95	
	G29/R Tranz Am	5308	14.95	
	G27/R Jet Pac	5306	14.95	
	G22/R Backgammon	5304	14.95	
	G10/R Chess	5301	14.95	

CASSETTE PROGRAMS for ZX Spectrum

Qty	Item		Code	Item Price £	Total £
	E9/S	Chess Tutor 1	4308	9.95	
	E7/S	Musicmaster	4306	9.95	
	E8/S	Beyond BASIC	4307	9.95	
	E6/S	Make-a-Chip	4305	9.95	
	L5/S	Print Utilities	4404	9.95	
				TOTAL £	

*I enclose a cheque/postal order made payable to Sinclair Research Ltd for £ ______

*Please charge to my Access/Barclaycard/Trustcard account no: ______

*Delete/complete as applicable.

Signature ______

Mr/Mrs/Miss ______

Address ______

CVG 912

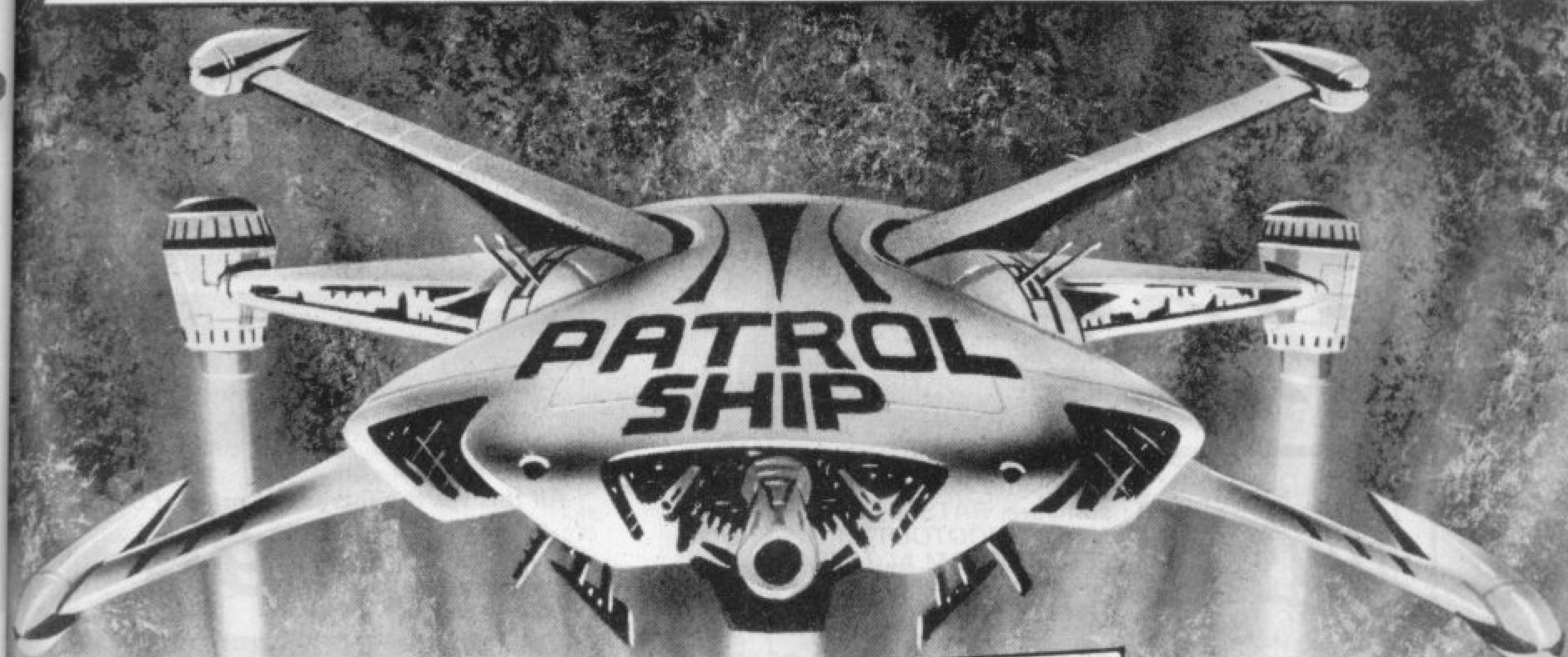
(Please print)

ZX Microdrive information request

Please add my name to the Microdrive Mailing List, *and* send me a colour brochure with full specifications of ZX Microdrive/Interface 1 ☐ *(tick here).* You can use the above form to send us your name and address.

BY STEPHEN PHIPPS

RUNS ON A ZX81 IN 1K




```
  9 LET D=INT VAL "RND*12"
 10 LET X=CODE "="
 11 LET E=SGN X+SGN X
 15 LET Z=D
 16 LET S=NOT Z
 20 LET Y=S
 21 LET B=Y
 22 LET A=Z
 70 PRINT AT A,B;"   ";AT X-E-SGN E,D;"■■■■";TAB D;"■■■■";TAB D;"■■■■";TAB D;"■■■■";TAB D;"■■■■";AT Z,Y;"▪Y▪"
 75 LET S=S+SGN X
 80 LET A=Z
 90 LET B=Y
 95 LET Z=Z+RND*E
100 LET Y=Y+(INKEY$="8" AND X>Y)-(INKEY$="5" AND X-X<Y)
110 LET Z=Z-(INKEY$="7" AND Z>NOT X)-RND
115 IF INT Z=X AND Y>D AND Y<D+E+SGN D AND INKEY$="0" THEN GOTO VAL "200"
116 IF INKEY$="0" THEN GOTO VAL "110"
120 IF Z>=X+SGN X OR INT Z=X-E AND Y<D+E+SGN X THEN PRINT AT A,B;"TOO BAD";U
130 GOTO VAL "70"
200 PRINT AT D,D;"WELL DONE","YOUR TIME=";S-D
```

The long patrol is almost over and you, pilot of a long range survey ship, are almost dozing off over your flight controls as your ship follows the automatic flight path back to your ship. But as you approach the mother-ship alarm bells shock you out of your relaxed mood. Turning on your scanners you see the mother-ship hovering on the edge of a Black Hole! The galactic winds whipped up by the Black Hole make it impossible for you to contact the mother-ship and tell them that you want to dock your craft. Then you discover another hazard. Your braking jets have malfunctioned. So you are going to have to attempt the docking manoeuvre without any help from the ship.

Although the limitations of a 1k program are great the author has attempted to make this game as challenging as possible without resorting to machine code.

You control the space ship using the curser control keys:

5 — left.
7 — up.
8 — right.
0 — hyperspace (to stop inside the mother ship).

I have deliberately limited the amount of control to make it harder.

Variables

D = random position of mother ship
X = variable assigned to save space because of the recurrence of the numeral 20
E = same as X but equal to 2
Z and Y = co-ordinates of patrol ship
A and B = prints a space on the last values of Z and Y respectively, to erase the patrol ship
S = score
Z = simulates buffeting winds by randomly moving the ship up and down
U = undefined variable to halt the game at the end

Program notes

NOTE: Remove all REM statements before attempting to run the game in 1K. If program should stop with error 4-OUT OF MEMORY then CONT will resume.

Illustration: John Higgins

STACK LIGHT RIFLE



Available for the SPECTRUM, VIC-20, and the COMMODORE 64, comes complete with 12 feet of cable and three exciting action software games including "HIGH NOON SHOOTOUT" with full sound effects!



STACK LIGHT RIFLE



With the development of the SLR comes the exciting range of software, RATS & CATS, HIGH NOON SHOOTOUT, CROW SHOOT, ESCAPE FROM ALCATRAZ, GLORIOUS TWELFTH and BIG GAME SAFARI.

CONTACT YOUR LOCAL DEALER OR ORDER DIRECT FROM

All this for the incredible price of only

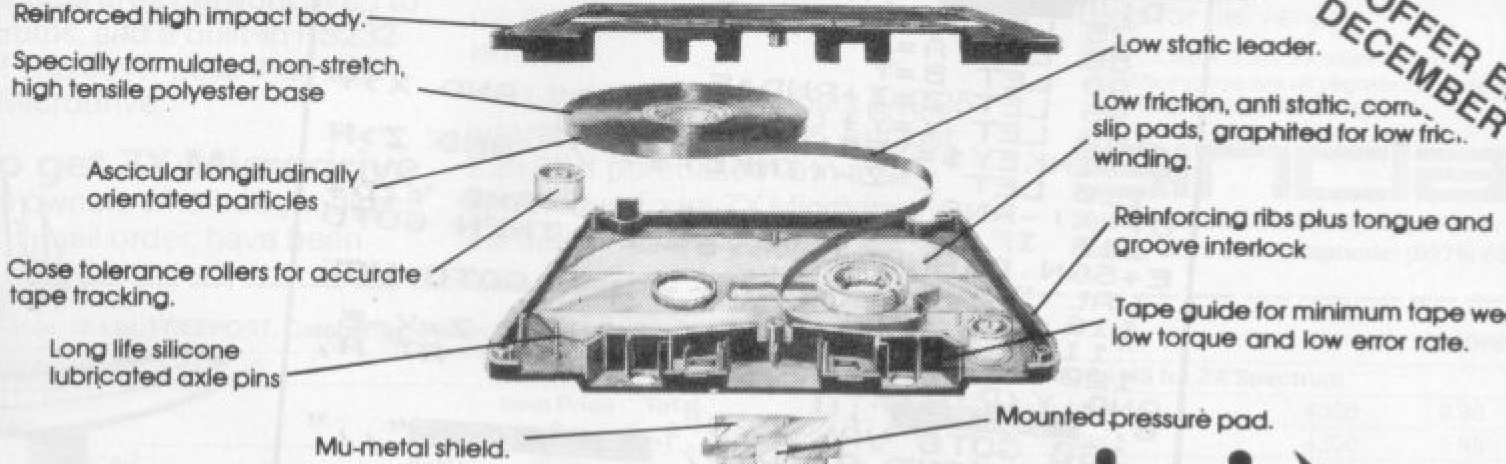
£29.95

including V.A.T.

STACK

Computer Services Limited
290/298 Derby Road, Bootle, Merseyside L20 8LN.
Tel: Sales **051-933 5511** Service **051-933 3355**
Telex: **627026** (Stack-G)

OFFER ENDS DECEMBER 31st



For some time a specially formulated professional quality data tape has been available to software producers and duplicators. This high quality tape has been specially formulated for micro based data storage systems. With the rapid growth of home computers and the unsuitability of most audio tapes used in short lengths, it has been decided to make this tape available to the general public under the name of PIRANHA.

The PIRANHA computer tape will soon be obtainable through selected retail outlets, but to give you a taste of the PIRANHA's astonishing data performance we are launching a short mail order campaign in the leading Micro magazines where we are offering a limited number of PIRANHA computer cassettes at an amazing price.

piranha Computer Cassettes

Oak House, High Street, Northleach, Gloucestershire GL54 3ET.

Please send the following DC 15 cassettes

Pack of ten at £3.99 plus £1 p&p No. ☐

Pack of one hundred at £39.90 plus £3.50 p&p No. ☐

I enclose £ .... Cheque/P.O.
(Payable to Piranha Computer Cassettes)

Name and Address (Block Capitals) ....
....
....
.... Post Code ....

Computer Type ....

Trade/Bulk Enquiries Welcome.

```
   60ONERRORRUN
   70MODE 6:VDU 19,0,4;0;
   80PRINT'"      Do you want inst
ructions ?(Y/N)"
   90A$=GET$:IF A$="Y" PROC_INST
RUCT:ELSE IF A$<>"N" GOTO 90
  100CLS:PRINT'"          What level
 1-7 (Slow-Fast)":INPUT TAB(17,3)
LEVEL:IF LEVEL<1 OR LEVEL>7 THEN
 GOTO 100
  110MODE 2:VDU 23,1,0;0;0;0;
  120PROC_INIT
  130PROC_SCREEN:PROC_GAME
  140IF CR=1 THEN CLS:IF YES=1 T
HEN RESTORE:GOTO 70
  150IF CR=1 THEN CR=0:GOTO 130
  160PROC_WIN
  170COLOUR 7:COLOUR 128:CLS:RES
TORE 1720:GOTO 130
  180REM************************
***INIT
  190DEFPROC_INIT
  200FOR N=224 TO 239
  210READ A,B,C,D,E,F,G,H
  220VDU 23,N,A,B,C,D,E,F,G,H
  230NEXT N
  240DATA 0,0,24,102,219,255,126
,36
  250DATA 28,60,126,126,126,124,
60,0
  260DATA 32,7,103,242,242,100,6
5,0
  270DATA 7,31,63,127,127,255,20
7,207
  280DATA 224,248,252,254,254,25
5,243,243
  290DATA 204,252,252,126,63,7,0
,0
  300DATA 51,63,63,126,252,224,0
,0
  310DATA 60,255,255,189,231,165
,189,231
  320DATA 3,7,7,31,31,63,255,255
  330DATA 128,192,240,240,248,25
2,255,255
  340DATA 255,255,255,255,255,25
5,255,255
  350DATA 8,56,248,56,8,8,8,8
  360DATA 16,2,80,4,129,32,4,145
  370DATA 2,16,129,64,55,145,2,1
29
  380DATA 4,16,0,1,16,32,129,42
  390DATA 0,0,0,0,0,0,35,255
  400CR=0:SC=0:AST=15:ADD=0:SHIP
=0:LIVES=3
```

```
  410A$=CHR$129:YES=YES:IF YES=1
 YES=0:GOTO 430
  420HI=0:DIM A$(6)
  430A$(1)=STRING$(4,A$+"  ")+"  "
+A$+"          "+A$+"      "
  440A$(2)=A$+"       "+A$+"    "+A$+"
       "+A$+"   "+A$+"  "
  450A$(3)="  "+A$+"    "+A$+"
"+A$+"   "+A$+"      "+A$+"   "
  460A$(4)="  "+A$+"  "+A$+"     "+A
$+"   "+A$+"        "+A$+"    "
  470A$(5)=A$+"         "+A$+"  "+A$+"
   "+A$+"    "+A$+"     "
  480A$(6)=A$+"   "+A$+"    "+A$+"
 "+A$+"    "+A$+"  "+A$+"     "
  490FOR N=1 TO (LEVEL*2)+5:PROC
_ADD:NEXT
  500ENVELOPE 1,1,-26,0,0,255,0,
0,127,0,0,0,126,0
  510ENVELOPE 2,1,0,0,0,0,0,0,12
6,-1,0,-5,126,0
  520ENVELOPE3,133,8,4,8,3,1,1,1
26,0,0,-10,126,0
  530ENDPROC
  540REM************************
*SCREEN
  550DEFPROC_SCREEN
  560X=9:Y=6:A=X:B=Y
  570PROC_STARS:PROC_PLANET:PROC
_LANDSCAPE:PROC_DISPLAY:PROC_AST
EROIDS:PROC_MOTHER_SHIP:ENDPROC
  580REM************************
DISPLAY
  590DEFPROC_DISPLAY
  600COLOUR 0:COLOUR 131
  610PRINT TAB(0,27);STRING$(60,
" ")
  620PRINT TAB(0,27);" SCORE:";S
C;TAB(12);"HI:";HI
  630PRINT TAB(0,28);" MEN:";LIV
```



Illustration: Terry Rogers

Avast lunarlubbers! And listen carefully to what Captain Blackheart, terror of ten solar systems has to say! Or else you might find yourself in a spot of trouble with a Black Hole!

Now, mateys, me and my band of 'orrible space rats have taken over this puny planet you call the moon — and kidnapped five of your top earth scientists. My friends are having some fun and games with these gentleman right now! The purpose of all these shennanigans is to make you hand over the earth to my pirates hoardes. If you don't — well, we'd better not think about it, had we mateys!

Can you save the scientists and stop the evil pirate plan! All you have to do is launch a rescue mission using remote control spaceships carrying space stormtroopers. Drop the troopers on the moon and defeat the pirates! Full instructions are included in the program. Happy landings . . .

```
ES;TAB(8);CHR$(128);":";SHIP;TAB
(13);"LEV:";LEVEL
  640ENDPROC
  650REM**************************
**STARS
  660DEFPROC_STARS:FOR N=1 TO 10
0
  670C=RND(7):IF C=5 GOTO 670
  680GCOL 0,C:PLOT 69,RND(1280),
RND(924)+100:NEXT:ENDPROC
  690REM**************************
*PLANET
  700DEFPROC_PLANET
  710GCOL0,6:D=-1:MOVE 100,940+3
8:REPEAT:D=D+8:XADD=38*SIN(RAD(D
)):YADD=38*COS(RAD(D))
  720MOVE 100,940:PLOT 85,100+XA
DD,940+YADD:UNTILD>360
  730COLOUR 2:COLOUR 134:PRINTTA
B(1,2);CHR$(130)
  740ENDPROC
  750REM*********************MOTH
ER*SHIP
  760DEFPROC_MOTHER_SHIP
  770SOUND 1,1,100,-1:VDU 19,15,
6;0;:COLOUR 5:COLOUR 128:R=0
  780VDU 31,8,5,131,135,132
  790VDU 31,8,6,133,32,134
  800COLOUR 6:VDU 31,9,6,128
```





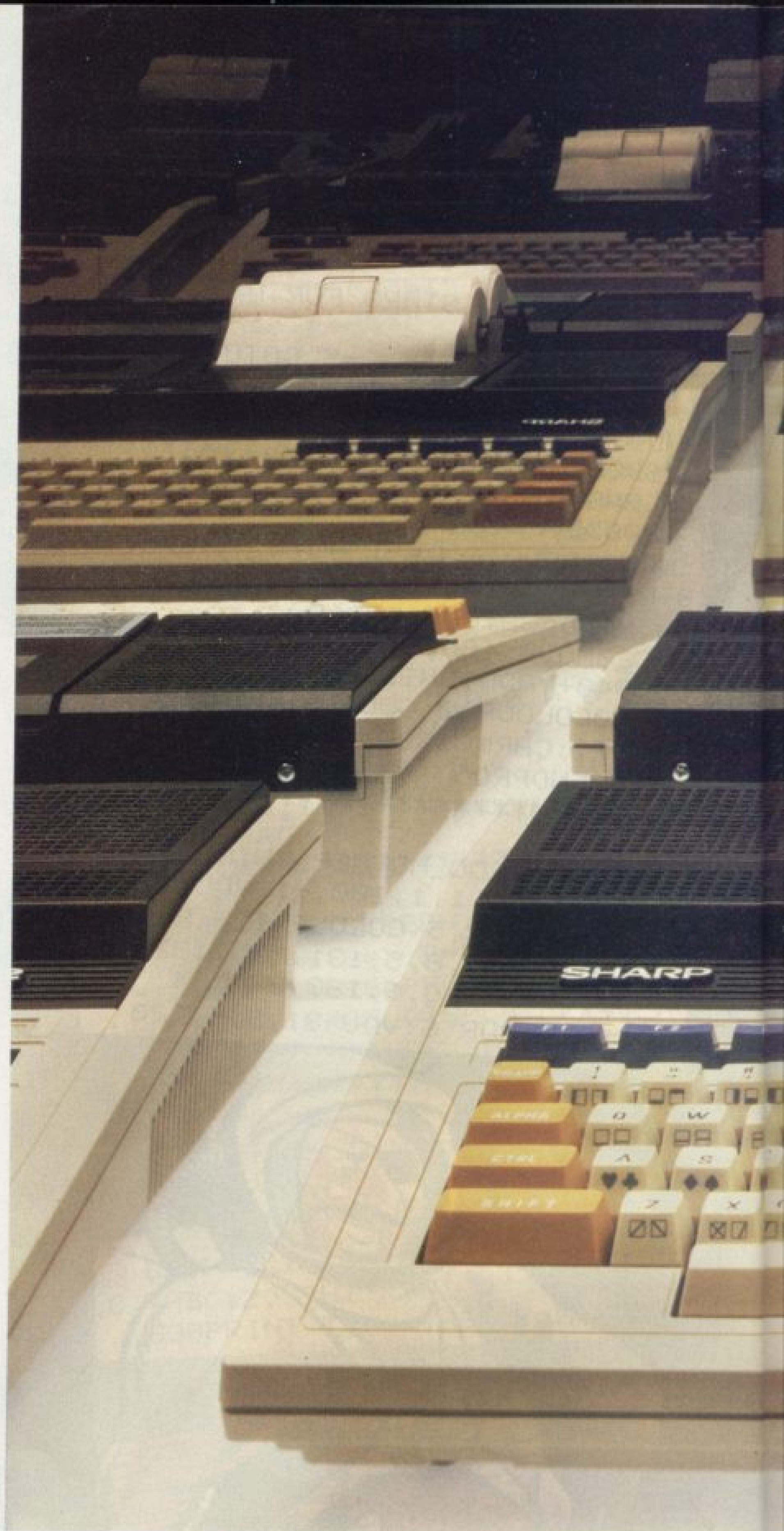
MOON MISSION

BY S ROBERTS

RUNS ON BBC MODEL B

IN 32K

NO LIMIT



Now, a home computer with virtually no limit to its possibilities. The astonishing new Sharp MZ700. A machine with a dazzling array of talents.

First, it's a 'clean' machine. So you are not limited to any one computer language. You have the flexibility to run and write programs in BASIC, FORTRAN, MACHINE CODE, PASCAL, ASSEMBLER and many others. And the MZ700's 512 predefined characters mean you can build up detailed pictures on the screen, without spending time specifying and designing special characters for games and special effects.

Second, it has a memory of 64K. So as your technique improves and develops, you are able to move forward to more and more advanced programming.

All of which makes this the perfect home computer for parents, as well as children.

The MZ700 gives you access to a wide choice of new software, from only £3·95 per cassette. An additional plotter/printer, costing £129·95, can produce high resolution graphics in 4 colours. A data cassette recorder is an extra at £39·95. Both add-ons fit snugly into this easy to carry compact system with no trailing wires. And you get ten exciting games, free on purchase, including Super Puckman, Circus Star, Snake v. Snake, and Man-Hunt.

The brilliant new MZ700.
The no-limit computer. £249·95. From Sharp. Where great ideas come to life.



CPU:	Z80A		1
ROM:	Monitor	4K byte ROM	1
	Character generator	4K byte ROM	1
RAM:	64K byte D-RAM		8
	4K byte V-RAM		2
1/O bus:	Expansion 1/O bus		1
	Additional printer 1/O bus		1
	Cassette READ/WRITE terminals		2
	Joystick terminals		2
RGB MONITOR/VIDEO MONITOR/RF OUTPUTS			

COMPATIBLE WITH SHARP MZ 700 SERIES

Look for this logo on software denoting Sharp Compatible Software.

To: Sharp Electronics (UK) Ltd,
Home Computer Division,
Sharp House, Thorp Road, Newton Heath,
Manchester M10 9BE. Tel: 061-205 2333

Please send me details of the Sharp MZ700.

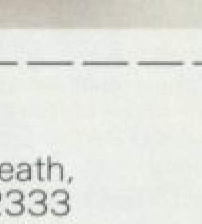
Name ______________________

Address ______________________

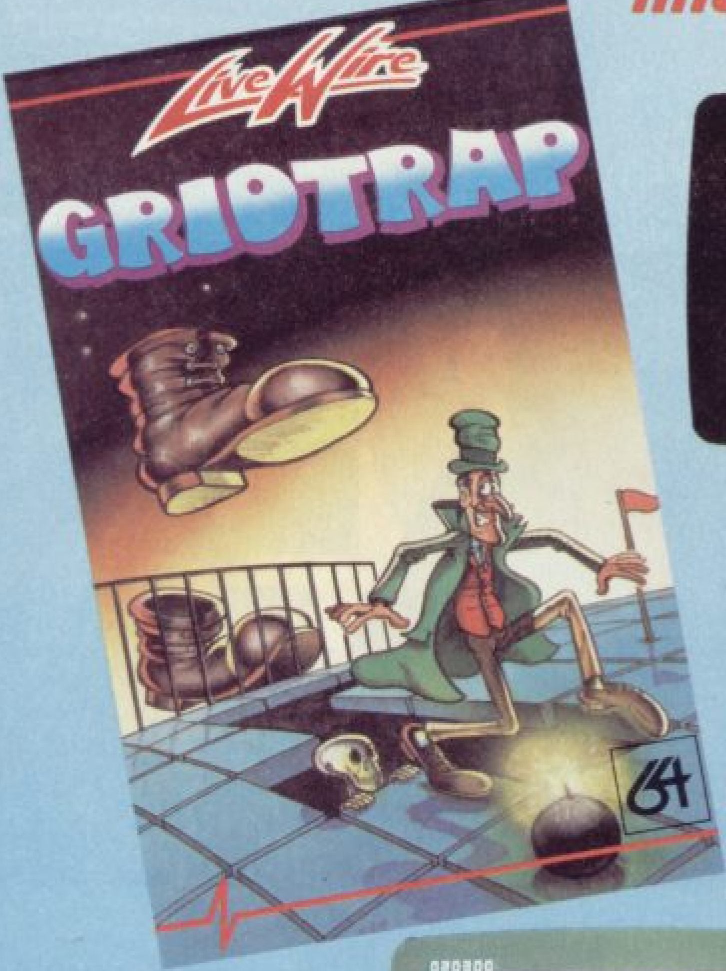
____

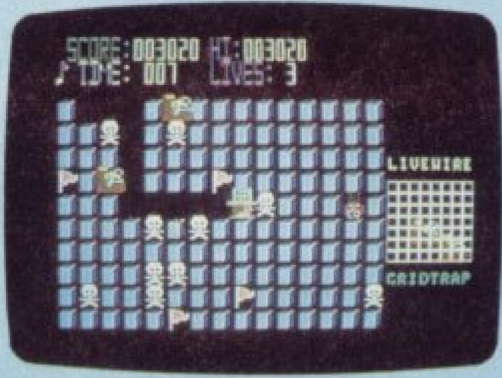
CV2

The world of
SHARP
where great ideas come to life.



THREE EXCITING NEW GAMES
IN THE LIVEWIRE SERIES FOR THE 64
FROM SUMLOCK MICROWARE





GRIDTRAP 64

We promise you won't be able to turn it off! It's a real skill tester and loads of fun to play!

Play with the Keyboard or Joystick. Choose your own operating keys with our **User Definable System.** Compete with an opponent by selecting **Two Player Mode...** Great graphics, super sound effects in the Livewire tradition including a selectable Melody Mode where the tune is available at the touch of a key and Melody On is indicated by a quaver graphic.

Program No. LWO4 £8.95

JUMPING JACK 64

Not just a game... an Experience!

IT HAS IT ALL!...EXCITEMENT... HUMOUR... STRATEGY

Jumpin' Jack leaps into a totally new look for the 64 created by **Three Dimensional Graphics** giving **Full Perspective** to the game... PLUS... hosts of features never seen before!

Submerging Turtles — Snakes — Crocodiles — Otters — Lady Frog — Dragonfly!!!



It's Fun ★★★

IT'S **FROGRIFFIC** ★★★

Program No. LW02 £8.95





TRIAD 64

NEVER BEFORE HAS A COMPUTER GAME LOOKED SO EXCITING...

...FELT AND PLAYED SO EXCITING...

Watch astonished as the Triad hurl themselves towards your craft in a remorseless battle against your intrusion.

Feel the heat blast of their anti-matter fields.

Your pulse laser will have to turn white hot before this encounter is over...

Featuring:-

A new DIMENSION...

Into the realm of TOTAL PERSPECTIVE GRAPHICS...

Program No. LW03 £8.95

SUPERB SOFTWARE FOR THE VIC 20



SP.04 GRIDTRAP Defuse the bombs, watch out for the mines and wandering boot. Joystick or Keyboard M/code **£7.95**

SP.01 SKRAMBLE Destroy the enemy installations and missiles in their underground silo. Joystick or keyboard M/code **£7.95**

SP.02 JUMPIN JACK Cross a busy road and treacherous river to get Jack home. Joystick or keyboard. Multi-colour Hi-Res Gr. M/code. **£7.95**

SP.03 TRIAD Defend your base against the suicidle fleets of alien hoverships. Joysticks or keyboard. M/code. **£7.95**



SP.13 STARSHIP ESCAPE A compelling and exciting real time graphic space adventure game. Joystick or keyboard M/code. **£9.95**

SP.16 MULTITRON The biggest alien encounter of all time. Wave after wave of invasion action. Joystick or keyboard M/code **£7.95**

SP.06 ASTRO FIGHTERS A space duel played by two players at once. Requires Joystick. M/code. **£6.95**

SP.07 CHOPPER Attack and destroy the enemy base but watch out for guided missiles. Joystick or keyboard. M/code. **£6.95**

Clip the coupon below and return to Sumlock Microware Dept. CVG 1
198 Deansgate, Manchester M3 3NE.
or Telephone: 061-834 4233

AMERICAN EXPRESS · ACCESS · BARCLAYCARD VISA

Please send me the following Software

I enclose Cheque/P.O. for £ ______ inc. P + P U.K. only.

To: Name ______

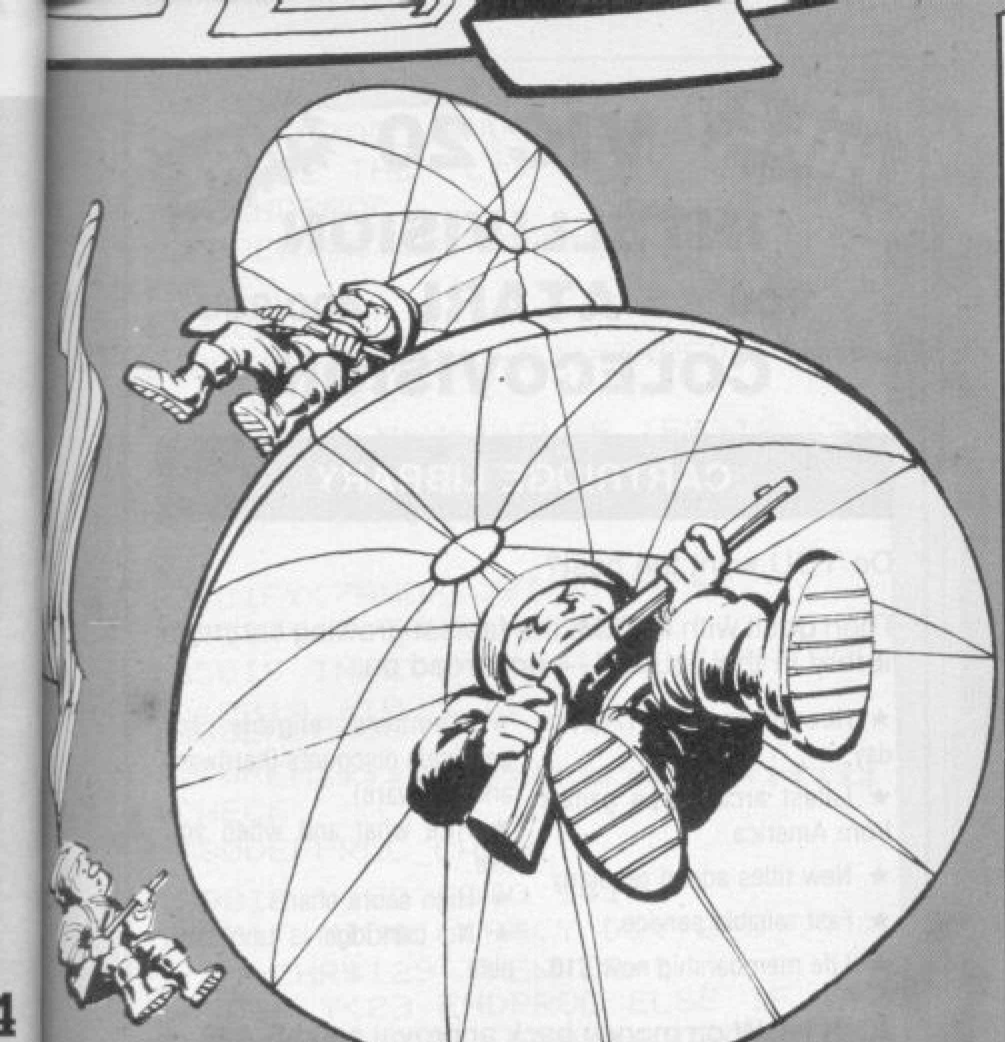
Address ______

Post Code ______

Also available from good computer dealers and bookshops nationwide.

SUMLOCK MICROWARE

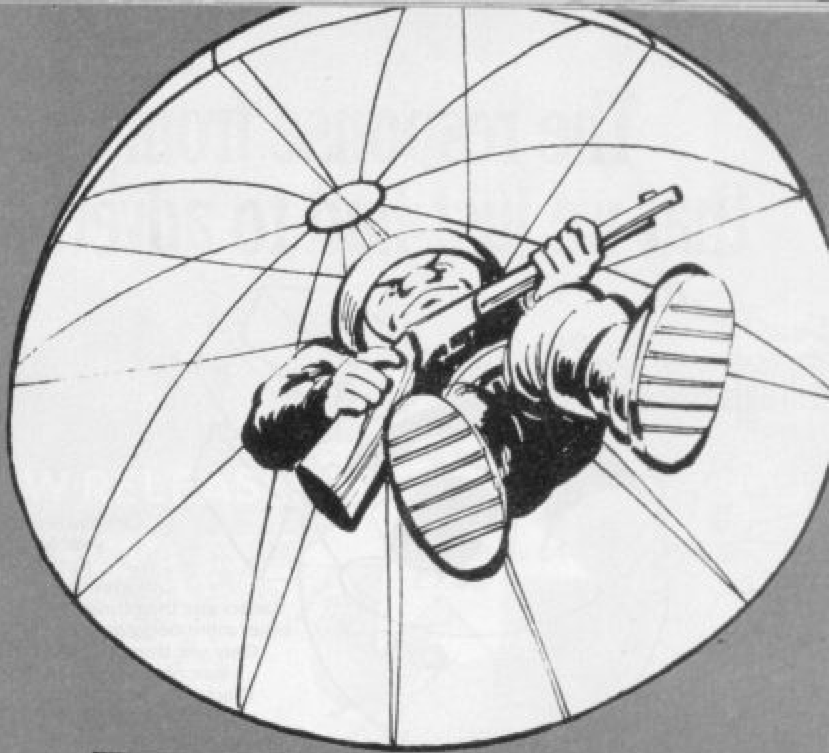
Trade enquiries welcome. Trade distribution nationwide ring 061-834 4233 for details.



```
 810REPEAT:FOR N=1 TO 7:VDU 19,
5,N;0;19,15,N;0;:TIME=0:REPEAT:U
NTIL TIME>=10
 820NEXT:R=R+1:UNTIL R=6:VDU20:
VDU 19,15,6;0;:ENDPROC
 830REM*****************INSTR
UCTIONS
 840DEFPROC_INSTRUCT
 850CLS:PRINT TAB(14);"*MOON RE
SKUE*"
 860PRINT:PRINT" The moon has b
een captured by PIRATES! They  h
ave kidnapped  FIVE  important
scientists.
        Your mission  is to  m
anouver your      REMOTE CONTROL
 SPACESHIP (RCS) through the ";
 870PRINT"asteriod belt and tou
ch down on the landing pad posti
oned on a hilltop."
 880PRINT" The RCS contains Par
atroopers who will try to recapt
ure the base."
 890PRINT" Drop  as many  ships
 as you can  at   various sites
 to gain points.        The G
AME is OVER when 3 of your RCS's
   are destroyed!!"
 900PRINT'TAB(9);"Z...........
...LEFT":PRINT'TAB(9);"X.......
.......RIGHT"
 910PRINT'TAB(9);"RETURN.......
...THRUST"
```

```
 920PRINT'"       PRESS ANY KEY TO
 PLAY THE  GAME":W=GET:ENDPROC
 930REM*********************LA
NDSCAPE
 940DEFPROC_LANDSCAPE
 950COLOUR128:COLOUR7:F=RND(13)
 960COLOUR3:PRINTTAB(0,25);"_";
STRING$(6,CHR$143);"_";CHR$143;"
_";STRING$(4,CHR$143);"___";CH
R$143;STRING$(20,CHR$138):COLOUR
15:PRINTTAB(F+3,22);CHR$139:COLO
UR3:PRINTTAB(F+2,23);CHR$136;CHR
$138;CHR$137
 970PRINTTAB(F+1,24);CHR$136;ST
RING$(3,CHR$138);CHR$137;TAB(F,2
5);CHR$136;STRING$(5,CHR$138);CH
R$137:ENDPROC
 980REM************************
***GAME
 990DEFPROC_GAME
 1000SOUND 2,-15,100,5:PROC_PROM
PT
 1010*FX15,0
 1020PROC_SHIP:PROC_PAUSE:PROC_L
ANDED:IF L=1 THEN ENDPROC
 1030IF (Y>8 AND Y MOD2<>0)OR Y>
22  PROC_CHECK
 1040IF CR=1 PROC_CRASH:ENDPROC
 1050PROC_ASTEROIDS:IF (Y>8 AND
Y MOD2<>0)OR Y>22  PROC_CHECK
 1060IF CR=1 PROC_CRASH:ENDPROC
 1070PROC_KEY:GOTO 1020
 1080REM************************
*PROMPT
 1090DEFPROC_PROMPT
 1100COLOUR 136:COLOUR 15
 1110PRINTTAB(0,0);"PRESS 'SHIFT
'  TO GO"
 1120IF INKEY(-1)=TRUE THEN COLO
UR 128:COLOUR 7:PRINT TAB(0,0);"
                    ":ENDPROC
 1130PROC_ASTEROIDS:TIME=0:REPEA
T UNTIL TIME>=40:GOTO 1120
 1140REM************************
***SHIP
 1150DEFPROC_SHIP:COLOUR 128:PRI
NT TAB(A,B);" ":A=X:B=Y:COLOUR 6
:PRINT TAB(X,Y);" ":ENDPROC
 1160REM**********************AS
TEROIDS
 1170DEFPROC_ASTEROIDS
 1180FOR Z=2 TO 6 STEP 2
 1190A$(Z)=RIGHT$(A$(Z),19)+LEFT
$(A$(Z),1):A$(Z-1)=RIGHT$(A$(Z-1
),1)+LEFT$(A$(Z-1),19):NEXT:COLO
UR 128:COLOUR 2
 1200FOR Z=1 TO 5 STEP 2
 1210PRINT TAB(0,(Z*2)+7);A$(Z):
NEXT
 1220FOR Z=2 TO 6 STEP 2
 1230PRINT TAB(0,(Z*2)+7);A$(Z):
NEXT
 1240ENDPROC
 1250REM************************
*LANDED
```

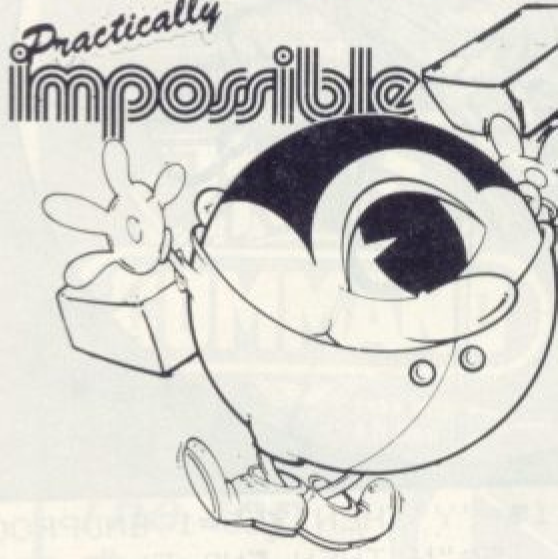
```
1260DEFPROC_LANDED:L=0:IF X=F+3
AND Y=22 THEN L=1
1270ENDPROC
1280REM************************
****KEY
1290DEFPROC_KEY
1300X=X-(INKEY(-67)=TRUE)+(INKE
Y(-98)=TRUE)
1310IFX<2 X=X+1 ELSE IFX>18 X=X
-1
1320Y=Y+(((INKEY(-74)=TRUE)*2)+
1)
1330IFY<7ANDX<>9THENY=Y+1
1340IFY<7 THEN Y=Y+1
1350IF INKEY(-74)=TRUE THEN SOU
ND &0010,-10,5,11
1360ENDPROC
1370REM************************
**CHECK
1380DEFPROC_CHECK
1390IF Y>20 GOTO 1410
1400IF MID$(((A$(Y DIV 2-3))),X
+1,1)=CHR$129 THEN CR=1
1410IF Y<23 ENDPROC ELSE IF Y=2
5 OR (Y=23 AND ((X=F+4)OR(X=F+2)
))OR(Y=24 AND((X=F+1)OR(X=F+5)))
OR((X=F+3)AND(Y=23)) CR=1
1420ENDPROC
1430REM************************
**CRASH
1440DEFPROC_CRASH:*FX15,0
1450FOR N=15 TO 1 STEP -1:COLOU
R RND(3)+4
1460PRINT TAB(X,Y);CHR$(RND(3)+
235)
1470SOUND 0,-(N+RND(2)-RND(2)),
RND(2)+4,5
1480TIME=0:REPEAT UNTIL TIME>=5
:NEXT:LET LIVES=LIVES-1:IF LIVES
=0 THEN PROC_GAME_OVER
1490ENDPROC
1500REM************************
**PAUSE
1510DEFPROC_PAUSE:IF LEVEL=15 E
NDPROC
1520PAUSE=28-(LEVEL*4)-3:IF PAU
SE<0 THEN PAUSE=0
1530TIME=0:REPEAT UNTIL TIME>=P
AUSE
1540ENDPROC
1550REM**********************GA
ME*OVER
1560DEFPROC_GAME_OVER
1570SOUND 0,-15,7,5:FOR P=100 T
O 250:SOUND 1,1,P,1:NEXT P:*FX 1
5,0
1580COLOUR7:PRINTTAB(5,16);"GAM
E  OVER"
1590FORN=1 TO 3:SOUND 1,2,100+N
*10,10:FORM=1TO1000:NEXT,
1600FOR N=1 TO 9000:NEXT
1610IF SC>HI THEN PROC_HIGH
1620PRINT TAB(4,16);"ANOTHER GO
?";TAB(7,18);"(Y/N)"
1630I$=GET$
```



```
1640IF I$="Y"THEN YES=1:ENDPROC
:ELSE IF I$="N"THEN END:ELSE GOT
O 1630
1650REM************************
***HIGH
1660DEFPROC_HIGH:HI=SC
1670COLOUR 7:PRINT TAB(0,12);"
 YOU HAVE TODAYS         HIGHEST S
CORE"
1680FOR M=1 TO 8:FOR N=1 TO 7:V
DU 19,7,N;0;:TIME=0:REPEAT UNTIL
 TIME>=10:NEXT:NEXT:ENDPROC
1690REM************************
****WIN
1700DEFPROC_WIN:SOUND 1,3,130,7
:FOR N=1 TO 1500:NEXT:FOR N=1 TO
 33
1710READ Q,W:SOUND 1,2,W*7,Q:NE
XT N
1720DATA 4,9,4,5,4,5,8,5,4,9,4,
5,4,5,8,5,4,5,8,7,4,7,4,12,4,12,
8,9,4,5,8,5,8,5,4,5,8,7,4,7,4,12
,4,12,8,9,4,5,8,5,4,9,4,5,4,5,8,
5,4,9,4,5,4,5,8,5
1730FOR N=1 TO 5000:NEXT:SHIP=S
HIP+1
1740IF SHIP MOD 10=0 THEN ADD=5
1750FOR N=1 TO LEVEL+ADD:LET SC
=SC+1
1760COLOUR0:COLOUR131:PRINT TAB
(7,27);SC:SOUND 2,2,2,1:FOR Z=1
TO 200:NEXT,
1770ADD=0:FOR N=1 TO 2000:NEXT
1780LEVEL=LEVEL+1:IF LEVEL>7 TH
EN LEVEL=7:IF AST<>0 PROC_ADD:PR
OC_ADD
1790IF AST<>0 PROC_ADD
1800L=0:ENDPROC
1810REM************************
****ADD
1820DEFPROC_ADD
1830L=RND(6):P=RND(20)
1840IF MID$(A$(L),P,1)=CHR$129
THEN GOTO 1830
1850LET A$(L)=LEFT$(A$(L),P-1)+
CHR$129+RIGHT$(A$(L),20-(P+1)):E
NDPROC
```

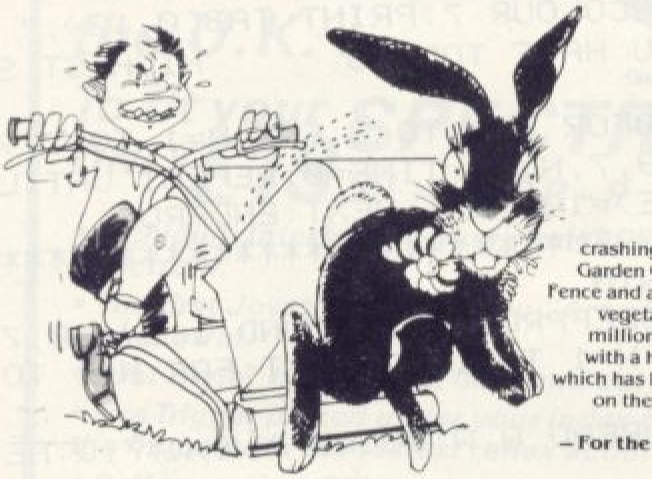
The response from our first advert was so great that we just had to advertise some of our other games

Practically Impossible



Can you steer your Silly Cyclops through the Barrier and then through five other mind-boggling games? Only one thing you can be sure of, it's going to be Practically Impossible. In some of the games Silly Cyclops closes his eye so you can't even see him. How on earth do you help a guy when you can't see him? As I've said, it's Practically Impossible . . .
– For any ZX Spectrum

mower mania



– You are employed by a miser millionaire as a gardener, who only provides you with an old lawn mower, on which the throttle has stuck open. You must try and mow the lawn avoiding crashing into the Gnomes, Garden Chairs, Tree, Pond, Fence and at all cost avoid the vegetable garden, as the millionaire has sprayed it with a harmful insecticide which has had strange effects on the rabbits . . . Phew! What a job . . .
– For the VIC 8k Expanded

Bridgeman



– You built the bridge and the responsibility is all yours. As bridges go it's not a bad job. Only one snag, due to a shortage of building materials there is only one section left and six gaps to fill. The Boss is on his way to inspect the job, can you juggle the single section around quickly enough so that he won't notice the gaps? It ain't going to be easy.
– For the Commodore VIC-20

ALTAIR 4



– To avoid an asteroid storm your star-cruiser was forced to make an emergency landing on the planet Altair 4. You have to make some makeshift repairs before take off. Altair 4 is an inhospitable planet, it has no atmosphere and countless galactic travellers have met their fate here. One or two creatures inhabit the planet and they don't like humans . . . except to eat . . .
– An adventure for the Commodore 64

CONNECT 4



– Now you can stretch your skills to the limit with this new computer version of the highly popular game Connect 4. Pit your wits and skill against the computer and simply connect four of your counters in a row, either vertically, horizontally or diagonally . . . did I say simply?
– For the Lynx

MEGA VAULT



– Poor Fred! Locked away in the vault with no food . . . can you help? Collect the food and make your way to the key and back to release poor Fred . . . easy, but what about the guardians and traps that are lurking in the Mega Vault that are intent on stopping you . . .
– For the Commodore VIC-20

Any of these games for just

£5.00 EACH

If you're a dealer — phone now!!
051-236 8062

Phone in your order on our 24 hour Ansaphone Service 051-236 8062

Please supply the following titles at £5 each.

	No. of copies		No. of copies
Bridgeman	☐	Mega Vault	☐
Practically Impossible	☐	Altair 4	☐
Connect 4	☐	Mower Mania	☐

In enclose Cheque/Postal Order No. ....
made payable to ACME SOFTWARE LIMITED,
for the amount of £......................
Goods to be despatched by return of post.

NAME......................
ADDRESS......................
....
POSTCODE......................

ACME SOFTWARE LIMITED, 49/51 The Albany, Old Hall St. Liverpool, Merseyside, L3 9EJ. Tel: 051-236 8062 CVG3

Acme Software Limited, 49/51 The Albany, Old Hall Street, Liverpool, Merseyside, L3 9EJ. Telephone: 051-236 8062.


INTERCEPTOR MICRO'S
4 NEW RELEASES
Our first utility program for the Commodore 64 £7.00
ASSEMBLER 64
INTERCEPTOR SOFTWARE
1021 STA $0
1021 DEX
1022 BNE
102C LDA #
1033 STA
1040 SEI
104B CLI
SUITABLE FOR THE commodore 64
An amazing new Arcade adventure on the Commodore 64 £7.00
INTERCEPTOR SOFTWARE
SIREN CITY
SUITABLE FOR THE commodore 64
A graphical adventure on the CBM 64 £7.00
TOKEN OF GHALL
Ctulhu et Ghunlli
A Graphical Adventure Suitable For The commodore 64
A super new idea for an Arcade game Commodore 64 £7.00
VORTEX RAIDER
SUITABLE FOR THE commodore 64
DEALERS
GIVE US A RING ON (07356) 71145 FOR A GREAT DEAL!! FANTASTIC DISCOUNTS FREE PROMOTIONAL MATERIAL AND MOST IMPORTANT OF ALL, SUPERB SOFTWARE
NAME
ADDRESS
☐ ASSEMBLER 64 (CBM 64) ☐ VORTEX RAIDER (CBM 64)
☐ TOKEN OF GHALL (CBM 64) ☐ SIREN CITY (CBM 64)
I enclose a cheque/P.O./Int. Money Order for £.........
Send order with payment to:—
Interceptor Micros
Lindon House
The Green
Tadley
Hants.




```
10 fora=1to10
12 readmv(a):next
14 data-22,22,0,-1,-23,21,0,1,-21,23
16 deffnr(a)=int(rnd(1)*462)+7702
20 gosub10000:goto3000
30 p=7910:g=0:l=35:v=7679:ii=180
40 gosub1000
45 ti$="000000"
50 pokep,38:pokep-22,34
60 forx=1to5
65 print"<home rvs e>"spc(4)g
66 tt=int(ii-(ti/60))
67 iftt=99ortt=9thenprint"<home>"spc(15)"
68 print"<home rvs e>"spc(15)tt
69 iftt<1then2000
70 rem move man
80 j=syntax(0)
90 f=0:m=0
95 h=h+1:ifh=2thenh=0
100 ifj>127thenf=1:j=j-128
110 m=mv(j)
180 ifm=0thenf=0
185 l=35:ifm=1orm=23orm=-21thenl=36
190 a=peek(p+m):b=peek(p-22+m)
195 iff=1thenq=m:h=1:m=0
200 ifa>39orb>39then800
210 pokep,32:pokep-22,32
220 p=p+m
230 pokep+co,3:pokep,l+2*h:pokep-22+co,1:pokep-22,l-2
231 iff=0then240
234 sh=sh-1:ifsh<0then240
235 append0,0,0,200,15
236 ford=1to20:next:append0,0,0,0,0
237 fora=2to10
238 ifpeek(a*q+p)<>32then900
239 pokea*q+p+co,1:pokea*q+p,39:ford=1to10:next:pokep+a*q,32:nexta
```



Illustration: Terry Rogers

WILD WEST

```
240 rem move neemee
250 ifpeek(w(x)+d(x))<>32then700
260 pokew(x),32:w(x)=w(x)+d(x)
270 pokew(x)+co,3+4*h:pokew(x),44+rnd(1)*2
280 rem gold
290 ifn=1then360
300 n=1:pokev,32:sh=6
310 v=fnr(1)
320 ifpeek(v)<>32orabs(p-v)<88then310
330 pokev+co,7:pokev,43
340 append0,0,240,0,15:ford=1to10:next
350 append0,0,0,0,0
360 nextx
380 z=fnr(1)
390 ifpeek(z)<>32then60
400 pokez+co,5:pokez,41
410 goto60
700 rem neemee has hit
710 a=peek(w(x)+d(x))
720 ifa<39then2000
730 pokew(x),32
740 q=fnr(1)
750 ifpeek(q)<>32orabs(p-q)<88then740
760 w(x)=q
770 d(x)=(int(rnd(1)*3)-1)+22*(int(rnd(1)*3)-1)
```

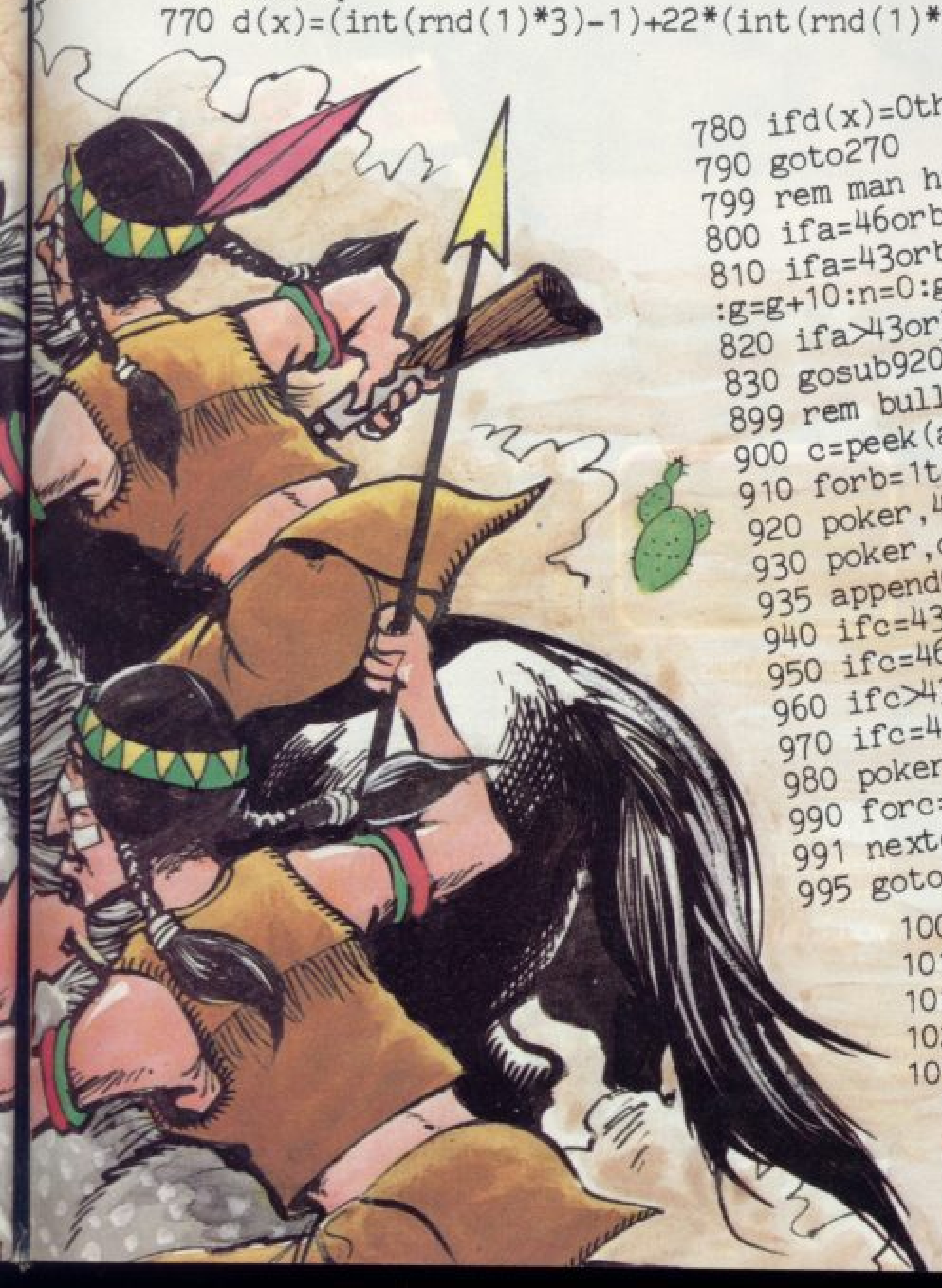
Howdy partners! My name is Chisholm Gulch, and I'm sheriff of this here township, Vicville. Right now, I'm on the trail of some lost gold — but the nasty Neemee tribe are on the warpath and making my life somewhat difficult. That's why I need your help. I need a posse to ride out with me to get the gold and fight off the injuns! How about it partners?

Well, if you decide to help the Sheriff of Vicville this is what you'll be up against. You have to move the Sheriff around the screen collecting gold nuggets. Additional points can be gained by shooting Neemees who come after you.

The Sheriff is armed with a six-shooter which he can shoot at Neemees or cacti with to clear a path to the gold. After he has used up six shots the Sheriff must pick up a nugget to get more ammunition.

Variables

- p—players position
- v—position of gold
- ii—time limit
- w(x)—neemee's position
- d(x)—neemee's direction
- n—flag. Is gold on screen? n# n = 1:yes
- sh—number of shots left in gun
- co—30720, add to screen position to get colour position.
- g—amount of gold held by player



```
780 ifd(x)=0then770
790 goto270
799 rem man hit
800 ifa=46orb=46thenm=0:goto230
810 ifa=43orb=43thenprint"<home rvs f>t0cde"
:g=g+10:n=0:goto210
820 ifa>43orb>43then2000
830 gosub9200:m=0:goto230
899 rem bullit hit
900 c=peek(a*q+p):r=a*q+p
910 forb=1to10
920 poker,40:append0,0,0,160,15:ford=1to10:next
930 poker,c:ford=1to10:next:append0,0,0,170,10:next
935 append0,0,0,0,0
940 ifc=43thengosub9100:n=0:pokev,32:goto240
950 ifc=46thengosub9100:goto240
960 ifc>43thengosub9100:g=g+10:goto990
970 ifc=41thenpokea*q+p,42:goto240
980 poker,32:goto240
990 forc=1to5:ifw(c)=rthenw(c)=7725:poker,32
991 nextc
995 goto240
1000 rem set screen
1010 print"<clr rvs e>gold+      <crsr rght>time"
1015 co=30720
1020 backup0,4,7,7
1030 fora=7702to7723
```

BY STEPHEN LANGSTAFF

RUNS ON A VIC 20 WITH SUPER-EXPANDER AND JOYSTICK IN 6.5K

```
1040 pokea,46:pokea+co,10
1050 pokea+462,46:pokea+co+462,10
1060 next
1070 fora=7702to8164step22
1080 pokea,46:pokea+co,10
1090 pokea+21,46:pokea+co+21,10
1100 nexta
1110 fora=1to20
1120 x=fnr(1)
1130 ifpeek(x)<>32then1120
1140 pokex,41:pokex+co,5
1150 nexta
1160 fora=1to5
1180 x=fnr(1)
1190 ifpeek(x)<>32orabs(p-x)<66then1180
1200 pokex,44:pokex+co,7
1210 w(a)=x
1220 d(a)=(int(rnd(1)*3)-1)+22*(int(rnd(1)*3)-1)
1230 ifd(a)=0then1220
1240 nexta
1250 rem move man in
1300 forx=7901top
1310 a=peek(x):b=peek(x-22)
1320 pokex,38+2*(int(x/2)*2=x):pokex+co,5
1330 pokex-22,34:pokex-22+co,5
1340 fory=15to0step-1
1350 append200,0,0,200,y
1360 nexty
1365 ford=1to100:next
1370 pokex,a:pokex-22,b:nextx
1380 return
2000 pokep,32:pokep-22,32
2002 fora=1to50
2004 backup0,6,1,7
2006 backup0,5,1,7
2010 nexta
2015 print"Game over"
2020 poke7927,38:poke7905,34
2030 poke7937,37:poke7915,33
2035 gosub9100:ford=1to500:next
2040 forb=7928to7936
2050 pokeb,39:ford=1to80:next:pokeb,32:next
2055 tn=0
2060 forx=7915to8157step22:pokex,44:pokex+co,7
:append240+tn,240+tn,0,0,15
2062 ford=1to100:next:append0,0,0,0,0:pokex,32
:tn=tn+1:nextx
2070 print"<rvs f>t2s2ars3drs2ars3drs2t7at6fgt7dt6r"
2075 print"<rvs f>t2s2ars3drs2ars3drs2t7at6fgrs3c"
2080 ford=1to2000:next
2090 print"<rvs e 2crsr down>))press fire to play))"
2100 ifsyntax(0)<128then2100
2105 n=0
3000 backup5,5,0,2:print"<clr>"
3010 print"<2 crsr down>)))))wild west)))))"
3020 print"<crsr down>you are the sheriff of"
3030 print" peaceville"
3040 print"<crsr down> a small town plagued "
3050 print" by neemees - - - - -"
3055 ford=1to1000:next
3060 print"<2 crsr down>pressfire to continue"
3070 ifsyntax(0)<128then3070
```

```
3080 print"<clr 2 crsr down>you are controling"
3090 print"<crsr down>the character !<crsr down
crsr left>£"
3100 print"<2crsr down>  do not sit on the "
3110 print"<down>)c a c t u s)"
3120 print"<crsr down>        plant"
3130 print"<crsr down>  ¼it does hurt⅔"
3135 ford=1to1000:next
3140 print"<2 crsr down>   press fire
to play"
3150 ifsyntax(0)<128then3150
3160 goto30
9000 rem sounds
9099 rem ricochette
9100 fora=15to1step-.7
9110 append0,0,a+235,a+235,a
9120 nexta
9130 ford=1to40:next
9140 append0,0,0,0,0
9160 return
9199 rem ouch
9200 print"<home>"spc(15)"ouch)"
9201 backup0,7,1,5
9202 fora=15to0step-.5
9210 append0,240,237,0,a
9220 nexta
9225 ii=ii-1
9230 append0,0,0,0,0
9231 backup0,4,1,7
9235 print"<home>"spc(15)"     "
9240 return
10000 rem set graphics
10010 poke52,29:poke56,29
10020 poke51,0:poke55,0
10030 fora=0to511
10040 pokea+7168,peek(a+34816)
10050 nexta
10060 forb=0to111
10070 readd
10080 pokeb+7432,d:next
10090 poke36869,255
10095 return
10100 data0,14,31,54,30,2,14,4
```

```
10110 data0,112,248,108,120,64,112,32
10120 data127,13,13,12,18,161,67,0
10130 data254,176,176,48,72,133,194,0
10140 data239,61,13,15,28,23,49,0
10150 data247,188,176,240,56,232,140,0
10160 data24,24,0,0,0,0,0,0
10170 data153,90,36,195,195,36,90,153
10180 data0,8,42,42,46,56,8,8
10190 data0,0,0,0,46,56,8,8
10200 data0,48,62,126,254,248,240,112
10210 data60,126,222,126,14,60,20,54
10220 data60,126,123,126,112,60,40,108
10230 data170,190,150,170,150,170,190,170
```



METAGALACTIC LLAMAS BATTLE AT THE EDGE OF TIME

A fast and original game for the unexpanded VIC. Challenging and colourful, with good sonics and a unique game action and design, this promises to be the most exciting new 3.5K VIC game since the introduction of GRIDRUNNER nearly a year ago. £5.50





LASER ZONE

Experience Laser Zone – an utterly NEW totally ORIGINAL masterpiece of Video games design. Learn to control two spaceships at once. Feel the EXHILARATION as, after long hours of practice, you control the two ships so that they function as a smooth, co-operative team! Feel the raw POWER as you lunge for the electro button and BLAST your enemies into expanding clouds of SPACE JUNK!! Feel the humiliation as a carelessly aimed BLAST slams into the side of your last remaining ship!! 8K expansion required.
Available for Commodore 64 £7.50 and VIC-20 £6.

MATRIX

Jeff Minter has taken Gridrunner – the game that topped bestseller charts in USA and UK – and created an awesome sequel.
Graphically superb, it features multiple screens, new aliens and attack waves, mystery bonuses, renegade humanoids, deflexor fields, diagonal tracking, countdown/panic phase and much, much more...
Packed into 20 mind-zapping zones and accompanied by incredible sonics.
8K expansion required.
Available for Commodore 64 £7.50 and VIC-20 £6.



HOVER BOVVER

A totally original arcade game for C64 featuring outstanding graphics and a sound track created by a professional Piano Wizard. Gordon Bennet has borrowed his neighbour's Air-Mo lawnmower. Mow your way through as many of the 16 lawns as you can before the pursuing neighbour retrieves his mower. Set your dog onto the neighbour to help you out of tight spots and don't annoy the gardener. Try not to plough through the neat flower beds or overheat your mower! £7.50





ATTACK of the MUTANT CAMELS

Planet earth needs you! Hostile aliens have used genetic engineering to mutate camels from normally harmless beasts into 90 foot high, neutronium shielded, laser-spitting death camels!! Can you fly your tiny, manoeuvrable fighter over the mountainous landscape to weaken and destroy the camels before they invade the humans stronghold! You must withstand withering laser fire and alien UFOs. Game action stretches over 10 screen lengths and features superb scrolling, scanner 1/2 player actions and unbelievable animation! Play this game and you'll never be able to visit a zoo again without getting an itchy trigger finger! Awesome m/c action!
Available for Commodore 64 £7.50.

ABDUCTOR

A classic new space game! ZAP the swirling alien hordes before they ram you – and abduct your humanoids! Survive the assault for long enough and you'll get an extra stage on your spaceship with double firepower! Awesome unexpanded VIC Action. £5.00



GRIDRUNNER

Finally true arcade quality on the unexpanded VIC! Shoot down the segmented DROIDS invading the grid. Beware of the pods and zappers! The awesome speed, sound, and graphics gives you the best blast available for unexpanded VIC.
Available for VIC-20 £5.00
Commodore 64 £5.00
Atari 400/800 £7.50

All orders add 50p postage and packing

Llamasoft

AWESOME GAMES SOFTWARE

49 MOUNT PLEASANT,
TADLEY, HANTS. RG26 6BN.
TELEPHONE: TADLEY (07356) 4478

LLAMASOFT GAMES NOW IN BOOTS, LASKEYS AND MANY OTHER RETAILERS.

Solar Software

51 Meadowcroft, Radcliffe,
Manchester M26 0JP
Tel: 061 724 8622

Quality arcade action games for the

COMMODORE 64

GALAXIONS The earth is being invaded by an alian force, the GALAXIONS have arrived from a dying planet, determined to destroy civilization as we know it. They came in formation, swooping and diving towards the planet earth. You and you alone can save mankind from the terrifying destruction the alians threaten us with.



100% Machine Code
3 Lives
Bonus ship at 10000
Progressive levels of play

£7·95

munch man 64 A fantastic version of this popular arcade game.



100% Machine Code
3 Lives, Bonus fruit
Power pills
4 Very inteligant ghosts

£7·95

Robin to the Rescue In days of old when knights were bold and the sheriff was in power, to play this game guide Robin Hood, to Marian locked up in the tower.



100% Machine Code
Sprite Graphics
3 Lives
12 Screens of arcade action

£7·95

All our games are available mail order P&P included from the above address. Orders sent by return post. Also available from all good computer shops.

Distribution, PROGRESSIVE London, P.C.S. Darwen, CENTRE SOFT West Midlands ALPHA TAPES, Merseyside, TIGER, Cheshire, CALISTO, Birmingham, LIGHTNING, London, LEISURESOFT, Northampton.

PARAMOUNT SOFTWARE

67 Bishopton Lane, Stockton, Cleveland.

OUTBACK £5.50

For any VIC 20 (Joystick).



Trouble is about to drop in on the occupants of 'Hoppy Valley' in the form of rather cunning swagmen. 'Ma Hoppy' has a very sophistocated defence set-up and , with your help, could win the day. Which is it to be– a tranquil Hoppy Valley or a swagmen takeover? How long will you survive? It gets tough and hot in the OUTBACK.

Pure Machine Code action. A game which pulls out all the stops on the VIC 20 to give you a deceptively aggressive and addictive challenge. It's a laugh too!

**5 skill levels. *6 Bonus Score symbols. *2 Bonus Life levels. *Running score on screen. *Hi Score display. *Superb Sound with 3 different tunes. *Extensive use of colour and graphics.*

COUNTDOWN £5.50

For VIC 20. 8K or 16K expansion – Joystick or Keyboard.

Your next assignment is to assist the government of a friendly power in averting a holocaust. TIME is important. ACCURACY is essential. COURAGE mandatory. But, above all, NERVE is the prime attribute needed for your mission as an agent in the crack S.M.U.

**Multi Skill/Time levels.*
**On Screen score display.*
**Bonus for each screen.*
**'Mission Accomplished' Bonus.*
**Bonus Life feature.*
**Hall of Fame.*
**Realistic Sound Effects.*
**Superb use of Colour and Graphics.*
**Keyboard or Joystick option.*



WRITING MARKETABLE PROGRAMMES?
Hitch your wagon to PARAMOUNT. Send for evaluation and terms.

TRADE ENQUIRIES
Tel.
0642 604470

PARAMOUNT is a registered trading name of Workstations Ltd.

To: PARAMOUNT SOFTWARE, 67 BISHOPTON LANE,
STOCKTON, CLEVELAND TS18 1PU (ENGLAND)

Please supply ......'Outback' at £5.50 each
...... 'Countdown' at £5.50 each

Name...
Address..
...
..Post Code............
I enclose cash/cheque/P.O. for £..........................

(Overseas orders add £1.50 for airmail.)

48K Spectrum & Atari 400/600/800



Blue Thunder

by Richard Wilcox

After skilfully piloting your Jetcopter through a bombardment of Electronic Storms, Ground & Sea Based Missiles and attack from Armoured Barrage Balloons, you thought you were safe to complete your mission ... But No! ... yet another wave of deadly Jet Fighters appear from nowhere with only one objective...to eliminate you!

Only your Hyper-Phase Lasers and amazing arcade skill can keep you alive to complete a task that looks impossible. As the only survivor of a once mighty invasion force you must penetrate deep beyond enemy lines. From a remote island protected by a complex defensive screen you must rescue your wounded comrades held captive beside an unstable nuclear reactor, which you must first destroy!

The ultimate in 100% Machine Code Arcade Games from a Master Programmer, achieving a new peak in programming perfection and super smooth movement. Blue Thunder sets astounding new standards in Hi-Res Graphics with Pixel Scrolling over 6 screens (Atari version only), 5 different missions, Hi-Score and incredible breathtaking PERSPECTIVE GRAPHICS!

Richard Wilcox Software carries a lifetime guarantee, should any of our games fail to load please return them for an immediate replacement.

All Richard Wilcox Software is available from leading software outlets or by completing the attached coupon.

Richard Wilcox Software

STATION ROAD, WALSALL, WS7 0JZ

To receive your advance copy of BLUE THUNDER before it goes on general release complete and post this coupon to us today! We will rush you your copy by return of post!

☐ 48K Spectrum (Cassette Only) £5.50

☐ Atari 400/600/800

☐ Cassette £9.95 ☐ Disk £11.95

Please rush me ..... copy/ies by return as ticked above.

I enclose a Cheque/Postal Order made payable to:
RICHARD WILCOX SOFTWARE for £..............

Name..

Address..

....

Telephone..

SEND TO: RICHARD WILCOX SOFTWARE
Station Road, Walsall, WS7 0JZ

TRADE ONLY ENQUIRIES WELCOME ON 05433 2787

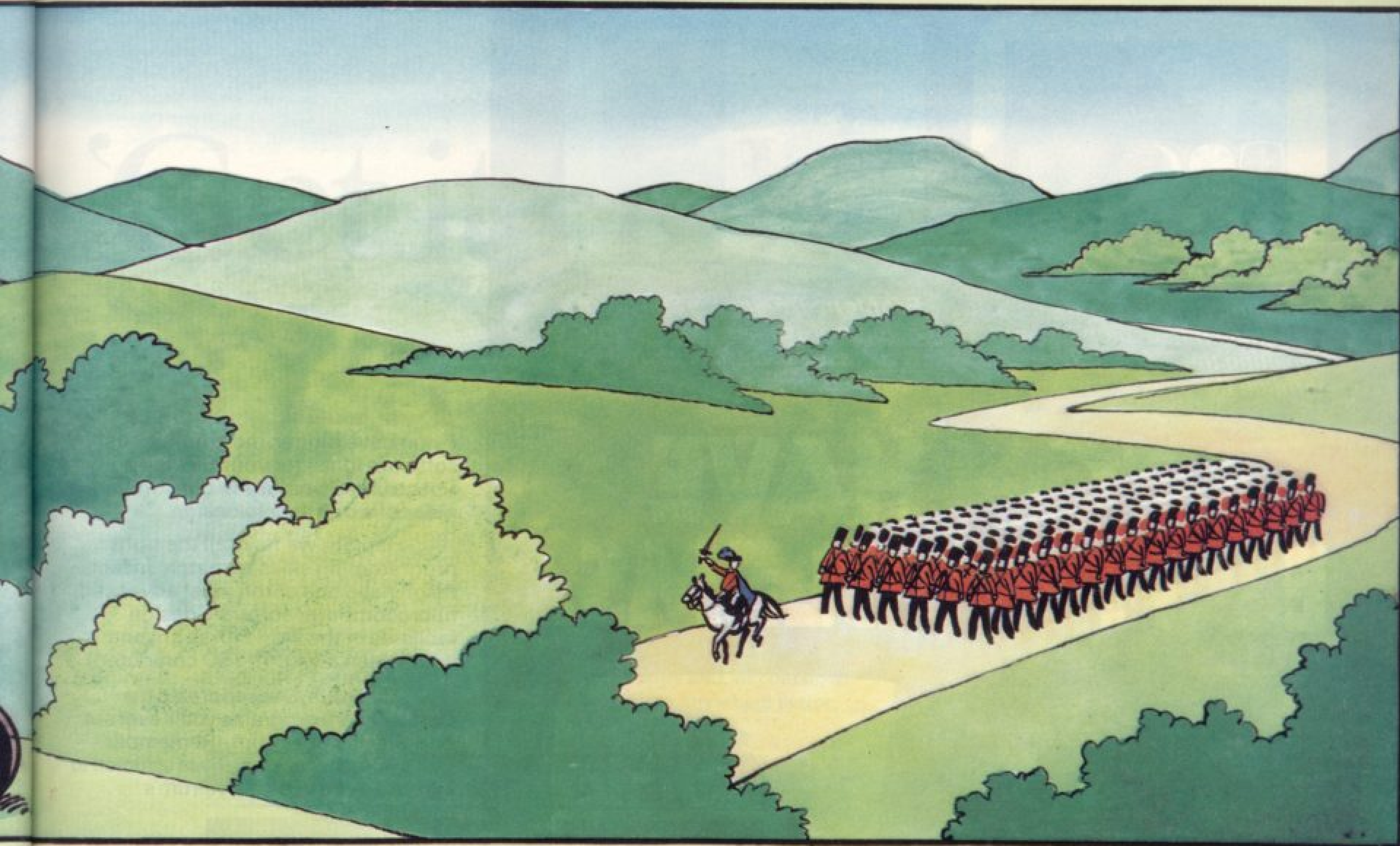


BY MICHAEL RICHARDSON

GUNNER

RUNS ON A DRAGON IN 32K

```
70 T=1
80 CLS
90 GOTO 110
100 CLS:PRINT"YOU MISSED AGAIN!!!YOU SHOULD   BE COURTMARTIALED!!AND ALSO THE WI
ND HAS CHANGED!!"
105 SCREEN 0,1
110 X=RND(100)
120 PLAY"T25;ABFGBAABGFBA"
130 PRINT"THE WIND IS TRAVELLING AT";X;"KM PER HOUR WITH YOU."
140 PRINT:INPUT"HOW MUCH GUNPOWDER TO USE(1 KG  TO 100 KG) AND  THE ELEVATION OF
 THE GUN OF 30  TO 90 DEGREES    ";P,E
150 IF E<30 OR E>90  THEN 140 ELSE 160
160 IF P<1 OR P>100 THEN 140
170 GOTO 200
180 CLS:PRINT"YOU MISSED!!! YOU WILL HAVE TO  TRY AGAIN!":GOTO 120
190 GOTO 130
200 PMODE 3,1:SCREEN 1,0:PCLS3
210 LINE(0,190)-(255,190),PSET
220 CIRCLE(30,40),20,,1,0,1
230 PAINT(30,50),2,4
240 LINE(100,190)-(104,180),PSET,BF:CIRCLE(102,175),10,,1,0,1
250 LINE(120,190)-(124,180),PSET,BF:CIRCLE(122,175),10,,1,0,1
260 LINE(140,190)-(144,180),PSET,BF:CIRCLE(142,175),10,,1,0,1
270 LINE(160,190)-(164,180),PSET,BF:CIRCLE(162,175),10,,1,0,1
```



The enemy convoy is approaching along the only road left open after your troops took control of all the bridges. Your job is to stop that convoy reaching its destination. You are in command of a field gun hidden behind some trees. You must judge the speed and distance of the approaching convoy and fire at it — aiming to cause as much destruction as possible. But it's not as easy as it sounds. You have to take into account the speed and distance of the approaching convoy. And there is a tricky wind blowing which could throw all your calculations out by a mile — literally! You have to judge how much powder to use and the elevation of the gun before blasting away at the enemy. Can you stop the convoy?

Program notes:

Lines 110: wind. 150-160: errors. 200-350: sets up screen. 330-370: hit or not.

```
280 PAINT(102,175),1,4:PAINT(122,175),1,4:PAINT(142,175),1,4:PAINT(162,175),1,4
290 DRAW"BM32,190;U5;R5;E7;F3;G4;R2;D5;"
300 PAINT(38,186),2,4
310 DRAW"BM215,190;BU2;U5;R4;U3;R10;D8;L2;D3;L2;U3;L6;D3;L2;U3;L2;"
320 PAINT(217,187),2,4
330 Z=E/100
340 Q=((P+(X/2))/Z)
350 CIRCLE(36+Q,190),Q,,Z,.5,1
360 W=92-Q
365 SOUND 34,10
370 IF W>-4 AND W<4 THEN GOTO 400 ELSE380
380 IF T>25 THEN GOTO 480
390 FOR C=1 TO 1000:NEXT:T=T+1:IF T>10 AND T<12 THEN GOTO 100 ELSE GOTO 180
400 PLAY"O1V31T2L4GGL8GGL4B-AAGGF+G"
410 FOR W=1 TO 500 :NEXT
420 CLS:PLAY "T8V31O4GL3CO3CDDFCCFDECCO4GL3C":PRINT"WELL DONE,YOU HIT THE ENEMY
    CONVOY IN";T;"SHOTS"
430 PRINT"DO YOU WANT ANOTHER GO(Y/N)?"
435 SCREEN 0,1
440 A$=INKEY$
450 IF A$="Y" THEN 10
460 IF A$="N" THEN 470 ELSE 440
470 END
480 CLS:PRINT"YOU HAVE RUN OUT OF AMMUNITION YOU FOOL!!!":GOTO 430
```

Illustration: Terry Rogers



***Problem.** Simulating an aircraft on a small microcomputer and depicting the 3-D world outside through the eyes of the pilot.*



***Problem.** Turning the Spectrum's numerical abilities into powerful verbal skills combined with a huge vocabulary.*

PSION HAVE BIG PROBLEMS.



***Problem.** Evaluating complex algorithms to provide sufficient depth of analysis in a short time.*



***Problem.** Integrating cartoon-quality graphics with the realism of the ski-slope.*



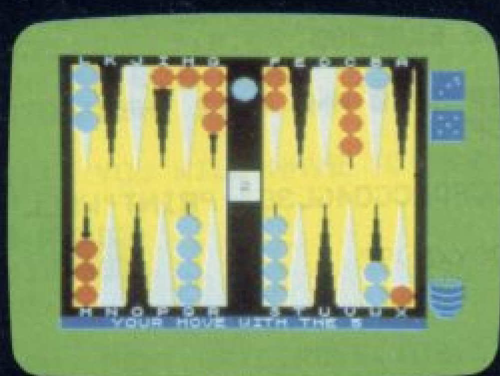
***Problem.** Creating cartoon-quality graphics in an entertaining and varied game.*



***Problem.** Providing complex, sophisticated data handling through easy-to-use commands.*



***Problem.** Modelling in 3-D on a small micro – performing some 7.5 million calculations for one hidden line drawing.*



***Problem.** Balancing the number of strategic factors required with a complex series of rules for a classic game.*

Psion have bigger, more ambitious software ideas for your Sinclair Spectrum. So naturally, our software is more of a problem to design.

Happily, we have all the right programming skills to match. In fact, Psion have one of the most advanced microcomputer software design facilities in the world. (Ask anyone who's seen a VAX 11/750 computer!)

That's why we can create the best software programs you'll ever see on a Sinclair Spectrum. (Remember – our 'Horizons' cassette was selected to introduce you to the Spectrum's capabilities.)

In all, there are 12 challenging titles, published exclusively under the Sinclair label. You can see the quality of eight of them alongside!

In addition, you can defend Earth from Space Raiders . . . destroy Planetoids . . . use VU-CALC in your business . . . even stroll in the park with Hungry Horace! And the Psion range is growing all the time – watch out for our latest program, 'Chequered Flag'.

Psion programs for the Spectrum:

- Flight Simulation (48K)
- Chess (48K)
- Space Raiders
- Planetoids
- VU-CALC
- VU-FILE
- VU-3D (48K)
- Hungry Horace
- Horace and The Spiders
- Horace Goes Skiing
- Backgammon
- Computer SCRABBLE® (48K)

'Horace' series produced in conjunction with Melbourne House. SCRABBLE® trademark and copyright licensed by Scrabble Schutzrechte und Handels Gmbh – A.J.W. Spear and Sons PLC subsidiary.

Whichever program you choose, you can be sure it's high-quality, and action-packed.

The popularity of our cassettes proves it. In a recent WH Smith chart of best-selling Spectrum software, no less than 7 of the top 12 were by Psion.

That means there's one good way to choose the best Spectrum software . . .

Just look for the Psion symbol on the cover of the cassette.

PSION

'Get it right at Laskys...



Games, business, education, word processing, accounting... The amazing potential of micro computers is virtually limitless, so you need the right advice in order to find exactly the right machine for you. At Laskys we have a specialist micro department called Micropoint, where we can help you to analyse your requirements and experiment with everything from the simplest to the most sophisticated equipment.
A choice of easy ways to pay, free 2 year guarantee, a commitment to exchange products if you are not completely happy and, of course, a nationwide after sales service. You can't buy micro anywhere better than Laskys – who else offers you so much?

Micropoint at Laskys

ATARI 400

£129.90

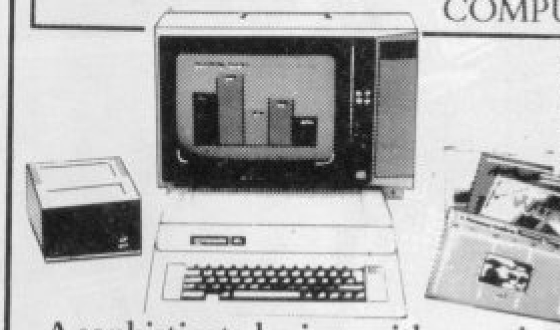


Home computer with 16K memory. Spill proof keyboard. Superb graphics. Colour and sound, includes Basic program kit.

FREE ATARI 410 CASSETTE PROGRAM RECORDER FOR LOADING AND STORING PROGRAMS. USUAL PRICE £49.90

APPLE IIe PROFESSIONAL HOME COMPUTER PACK

PLUS VOUCHERS WORTH OVER £100 FOR PROGRAMS & ACCESSORIES.



£998

A sophisticated micro with amazing scope for home and office.
64K memory, disk drive, RF modulator enabling you to use your existing TV as monitor, includes Owners Pack.

LYNX 96K

Compact powerful 96K home unit at a budget price. Colour, sound and graphics. Compatible with most cassette players. £298

Lynx Parallel Printer Interface £49.90
Lynx Serial Printer Interface £3.90

Recommended Epson printers for Lynx
Epson FX80 £498
Epson MX100/3 £539
Epson RX80 £349

EASY WAYS TO PAY
ASK IN STORE FOR DETAILS

LASKYS
The Home Entertainment Specialists

ALL MAJOR CREDIT CARDS ACCEPTED

XMAS & NEW YEAR OPENING HOURS
(Mon 5th Dec – Mon 9th Jan)
ALL STORES
9am – 7pm (Mon-Fri)
9am – 6pm (Sat)
Sat 24th Dec closes 4pm
Open Mon 2nd Jan
QUEENSWAY & GOLDERS GREEN
OPEN EVERY SUNDAY
11 am-7pm

LONDON & HOME COUNTIES
BEXLEYHEATH 15-16 The Broadway
BROMLEY 22 Market Square
COLCHESTER 12 Trinity Square
CROYDON 77-81 North End
ENFIELD 46-48 Palace Gardens
KINGSTON Eden Street
LUTON 192 Arndale Centre
READING Friar Street
RICHMOND Hill Street
ROMFORD South Street
SLOUGH Queensmere Centre
WATFORD Charter Place
SOUTHERN ENGLAND
BRIGHTON 151-2 Western Road
BRISTOL 16-20 Penn Street
CHATHAM 8 The Pentagon
GLOUCESTER 25 Eastgate Street
MAIDSTONE 79-81 Week Street
SOUTHEND 205-206 Churchill West
MIDLANDS AND NORTH
BIRMINGHAM 19-21 Corporation St
CHESTER 7 The Forum
LEEDS 28-34 Albion Street
LEICESTER 45 Market Place South
LIVERPOOL 33 Dale Street
157 St John's Precinct
MANCHESTER
12-14 St Mary's Gate
NEWCASTLE-UPON-TYNE
6 Northumberland St
NORTHAMPTON 78 Abington Street
NOTTINGHAM 1-4 Smithy Row
OXFORD 16 Westgate
PETERBOROUGH Queensgate Centre
PRESTON Guildhall Arcade
SHEFFIELD 58 Leopold Street
WOLVERHAMPTON 2 Wulfrun Square
YORK 10a Coney Street
SCOTLAND
EDINBURGH 4-6 St James Centre
GLASGOW 66-70 Buchanan Street
WALES CARDIFF 122 Queen Street

Watch out for new Laskys Stores opening soon in Ealing, Southampton, Brent Cross, Cambridge and Exeter.

SOFTWARE FOR YOUR MICRO

British Broadcasting Corporation



These new software packs are designed to exploit to the full the sophisticated design and great versatility of the British Broadcasting Corporation Microcomputer.

White Knight: Mark Eleven

The amazing chess program that won joint first place in the P.C.W. Microcomputer Chess Championships.
£11.50

Canyon

'The game is fascinating, the graphics are good, the instructions excellent, and the whole thing is a pleasure'
– THE MICRO USER
£10.00

Dr Who: The First Adventure

Wriggling Worms and Terrordactyls are among the hazards facing Dr Who in this exciting graphics game.
£10.00

VU Type

An ingenious program that teaches you to touch-type without the need for a book, using exercises approved by Pitmans.
£16.10

Record Keeper

A very useful program enabling householders and small businessmen to keep track of their lists.
£13.80

Taxcalc

This Which? income tax calculator enables you to check your tax bill for 1982-83.
£17.25

Toolbox

This invaluable set of programming aids includes a REM stripper, cruncher, RAM test and program re-sequencer.
£21.00

Beyond Basic

A book and software pack explaining and demonstrating assembly language programming using the British Broadcasting Corporation Micro's built-in BASIC assembler.
Book £7.25 Software Pack £11.50
Published jointly with National Extension College Trust Ltd.

The Friendly Computer Book

An illustrated, step-by-step guide to computing and BASIC, by Jonathan Inglis.
£4.50

The original software range from the British Broadcasting Corporation is still available:

Early Learning. Fun Games. Games of Strategy. Home Finance. Painting. Drawing. Music.
The Computer Programme Programs Vol. 1
The Computer Programme Programs Vol. 2
Each £10.00

ON SALE NOW AT
SELECTED BOOKSELLERS AND
MICROCOMPUTER SHOPS

Prices include VAT.

PROGRAM EXTRA

Write to Program Extra at *Computer and Video Games*, Durrant House, 8 Herbal Hill, London EC1R 5EJ. Please mark your letters "Program Extra". Remember we'll pay £10 for any tips or short programs we print.

This issue sees the start of a brand new feature devoted to helping you get more out of the games listings in *Computer and Video Games.*

Program Extra is going to bring you the inside story on what makes the games in *C&VG* that little bit better than the rest and hopefully help you write great games programs of your own.

The aim of Program Extra is to show the innovative and original ideas our programmers have used to create their stunning arcade style games.

We don't want Program Extra to be a one sided affair, so we're offering £10 for any tips or short programs that you think might put that extra added ingredient into your fellow readers' programs.

The first game to come under the scrutiny of our Program Extra supremo, Seamus St John, is Andrew Brown's excellent version of the arcade hit Q*Bert for the BBC model B computer.

You might have imagined that Q*Bert took Andrew many weeks to perfect, but nothing could be further from the truth. The game took only two days to complete.

One of the main problems that Andrew had to overcome was being able to move Q*Bert across the pyramid without actually rubbing it out.

He solved this by employing the VDU5 command, which appears to allow you to have to have objects in the foreground and the background. In this particular case the character Q*Bert is in the foreground bouncing across the surface of the pyramid in the background.

The VDU5 command also lets you create multi coloured shapes by superimposing defined characters on top of each other.

Andrew got the idea for the game while playing Q*Bert in a local arcade. That evening he went home and designed the pyramid in what he called an "exercise in programming", and by the end of the next day the game was finished.

Budding BBC programmers can learn a lot from Andrew's game. He uses a very structured style of writing and his program includes quite a few "magic" tricks.

One of these is clever use of the GCOL statement to produce smooth and very fast animation. This method of animation is difficult to use, you'll need to study the Q*Bert listing and the BBC manual to grasp it but I can assure you it's worth the effort.

One thing the author said he would change if he had the chance is the keyboard scanning routine. Instead of using INKEY$(O) Andrew would change to INKEY-(required number) this would give the game improved keyboard response. Why not try it out when you type in the listing?

The author of our Sharp program, Cyborg, is an old hand at writing games. Craig Shorland has already had several of his earlier efforts published. Craig reckons that the best way to write a program is to get as far away from your computer as possible! Old fashioned pen and paper are what he turns to when he begins to develop a new game.

Drawing up a flow chart — a kind of shopping list and computer map rolled into one — is an invaluable aid when writing concise, uncluttered programs.

Flow charts also give you a permanent record of what you plan to do once you forget or go a little off track.

Craig says that anyone can write a good game program. All you need to do is take a little time and care to plan the program in advance.

In next month's issue *Computer and Video Games* will be printing a game for the Spectrum which we think rates as one of the best we've ever published. Mark White's Demolition is easily up to the standards of most commercial software. Program Extra will hopefully reveal a few of Mark's secrets!

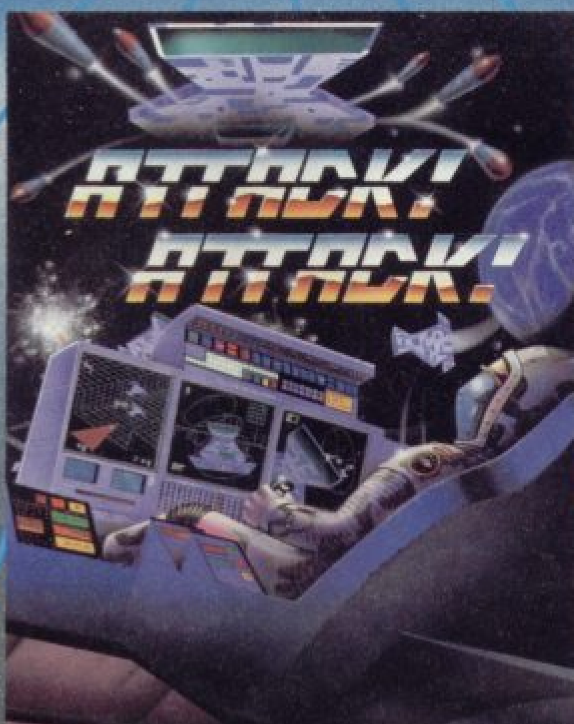
And remember *Computer and Video Games* is always on the lookout for new and original games. From next issue we'll be paying £25 to the designer of the program we decide is *C&VG*'s Game of the Month. Each Game of the Month will get special treatment — including an interview with the designer in Program Extra. So get programming!

That about wraps it up for this month. Except to say that if you have any difficulty understanding how any of *C&VG*'s listings work, or would like to know how to use parts of the programs in your own games then please don't hesitate to write in.

We're not quite sure whether the World's ready for these games . . . but we've released them just the same.

VOYAGER SOFTWARE







The Marcon Empire have invaded Earth and enslaved the population. An endless stream of stellafreighters now plunder the earth's mineral wealth draining the very lifeblood of the planet.
A small band of freedom fighters are still operating from an abandoned mining station on the Moon; one of them is you.
As you set out from your secret base your first objective is to manoeuvre through the barrage of lethal space mines to one of the enemy re-charging stations to re-charge your neodinium lasers; then you will be able to carry on with your mission of destroying the marauding stellafreighters.
There is rumour of a Marcon munition station near by, heavily defended by missiles; if only you could locate and plunder it; your heroic band of avengers would then have enough fire power to strike a massive blow for freedom . . . or die in the attempt . . .
Avenger is for the Dragon 32.

Tension mounts as your Stratofighter enters the patrol area. Enemy Skyfreight Convoys are increasing as their need for Iridium Ore grows in the arms race against you.
Your raydon missile sight picks up an enemy convoy entering your quadrant. You select hyperdrive and are slammed back in your seat. Fingers hover over firing buttons as enemy fighters peel away from the convoy to engage you. As your epic battle begins the enemy Skyfreighters unleash wave after wave of air to air missiles against you. The battle rages on and your will to survive and determination to win increases. The convoy must be destroyed: your people are depending on you.
Night falls and glaring explosions fill the sky; don't let your concentration wander, if the convoy gets through your people are doomed, you must succeed; you must . . .
Attack Attack is for the Commodore 64.

Your mission: destroy the Etron rocket base on the planet Hagon.
Piloting the most sophisticated space fighter yet conceived you know that if your mission fails the awesome Etron rocket attacks will destroy your galaxy.
Entering the fearsome space tunnel, the first of Hagon's many sophisticated defence systems, every fibre of your being is filled with dread.
The Hagon fleet have been alerted and wave after wave of Astrofighters come hurtling toward you. As you battle your way to the end of the tunnel you begin to realise just how suicidal this mission could be.
Zooming through Hagon's defensive asteroid belt your concentration intensifies; you have only a fraction of a second to differentiate between asteroids, space mines and Etron rockets as they flash toward you.
Hugging the planet's surface, dodging defence poles and trying to deal with everything else the Hagon's throw at you, you remind yourself that the fate of an entire galaxy rests on the outcome of your mission; you must succeed . . . Quasar is for the Commodore 64.

Please supply the following games:

	No. of copies
Avenger	☐
Quasar	☐
Attack Attack	☐

I enclose a cheque/ P.O. payable to: Voyager Software

for £............

Name ....

Address ....

....

Voyager Software, Business Centre, Claughton Road, Birkenhead, Merseyside, L41 6ES. Tel: 051-647 8616.

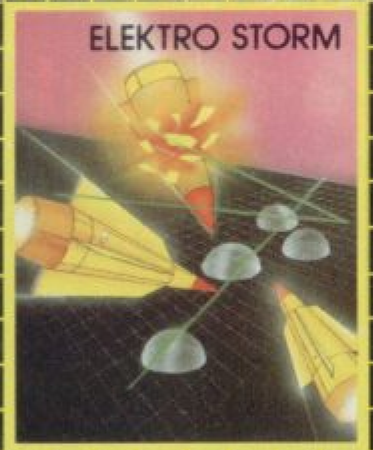
Any of these games for just

£5.99 each including a lifetime guarantee and dispatch back to you by return of post

Trade enquiries welcome, ring Roy Butler on 051-647 8616 NOW!!

Voyager Software, Business Centre, Claughton Road, Birkenhead, Merseyside, L41 6ES. Telephone: 051-647 8616.

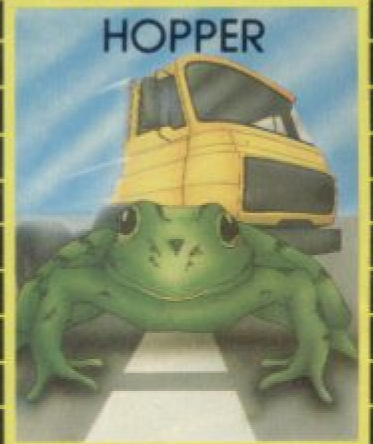
Arcade Action For Spectrum and ZX81 16K, 48K



ELEKTRO STORM

Earth is under attack from wave after wave of intergalactic missiles – your mission is to blast them out of the sky with your laser cannon before the whole human race is wiped out.

SPECTRUM 48K 5·95

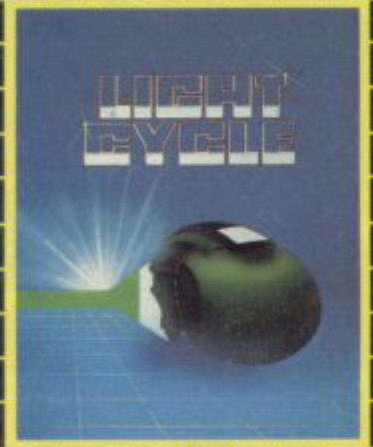


HOPPER

Help FERGUS and his friends across the highway avoiding the traffic, and then over the treacherous river on the backs of turtles and logs to the safety of the lilly pond.

Features include: 6 lanes of traffic, diving turtles, crocodiles & flies.

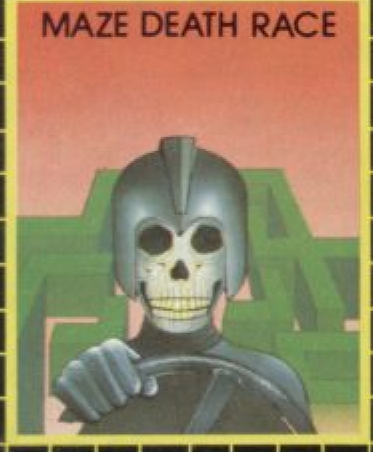
ZX81 16K 3·95
SPECTRUM
16K 48K 5·95



LIGHT CYCLE

The MASTER CONTROL PROGRAM has ordered you to race your light cycle on the infamous grid. This is an incredibly fast, adrenalin pumping game that is very addictive. There is an option to race against either another player or the computer – but we warn you its very very good!

SPECTRUM
16K 48K 5·95



MAZE DEATH RACE

Drive your 500b.h.p. racing car around a giant maze (9 times the size of the TV screen on the ZX81 version, 32 times for the spectrum). Watch out for the hazards – oil, ice, fallen rocks etc. Not the least of your worries are the chase cars also in the maze – one touch with these means instant death!

ZX81 16K 3·95
SPECTRUM 48K 4·95



PANIC

"It must be a nightmare" he screamed as he ran around the maze of floors, desperately climbing ladders to different levels in a vain attempt to evade the monsters.
He had only his neutron hammer to dig holes for the vile creatures to fall into, but even then he had to repeatedly hit them before they dropped to their deaths. As if that wasn't bad enough, the oxygen supply was running out!

SPECTRUM 48K 5·95

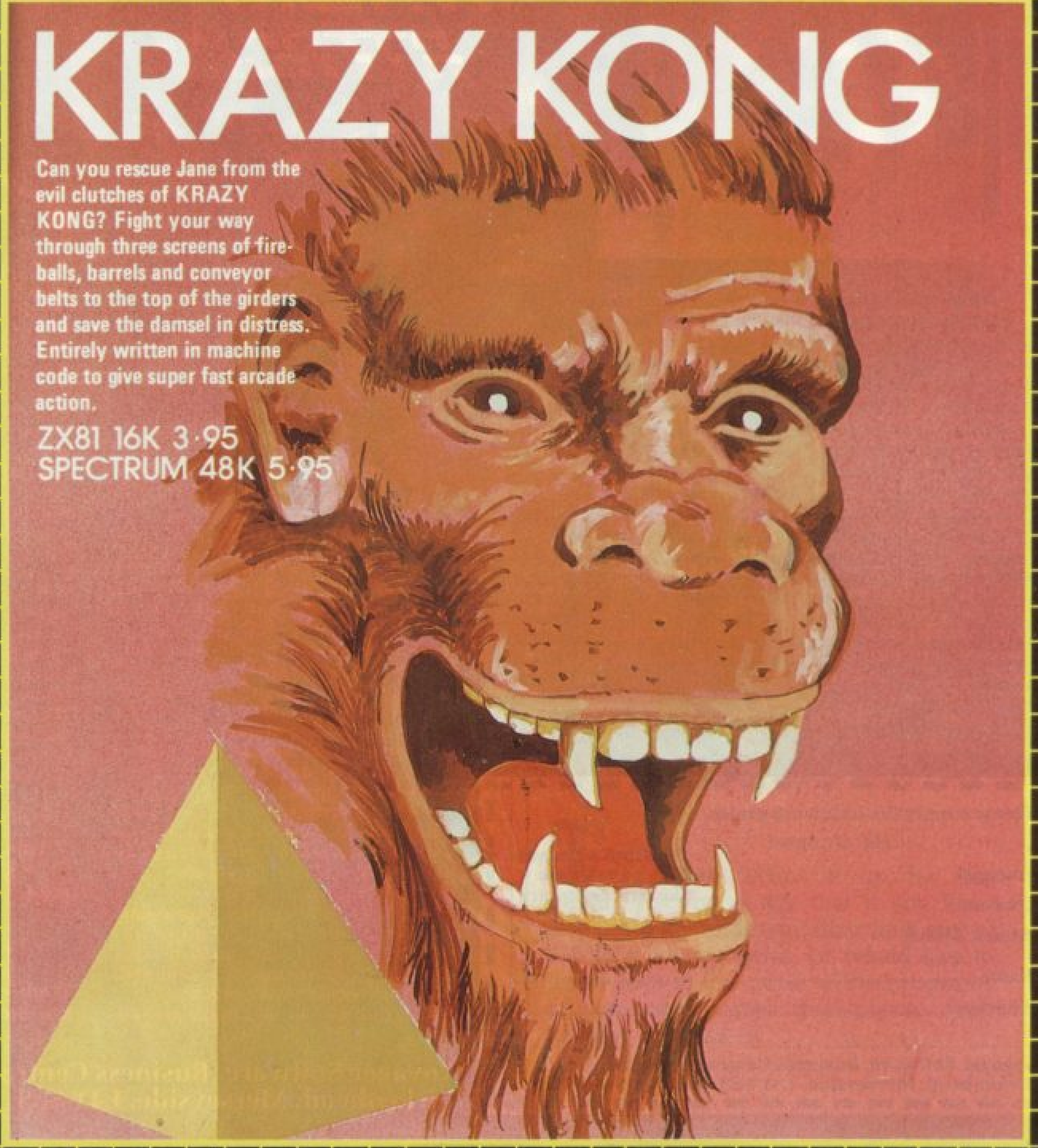
PSS

CHEQUE OR P.O. TO P.S.S. 452 STONEY STANTON RD. COVENTRY CV6 5DG.
INSTANT CREDIT CARD SALES TEL (0203)667556.

KRAZY KONG

Can you rescue Jane from the evil clutches of KRAZY KONG? Fight your way through three screens of fireballs, barrels and conveyor belts to the top of the girders and save the damsel in distress. Entirely written in machine code to give super fast arcade action.

ZX81 16K 3·95
SPECTRUM 48K 5·95



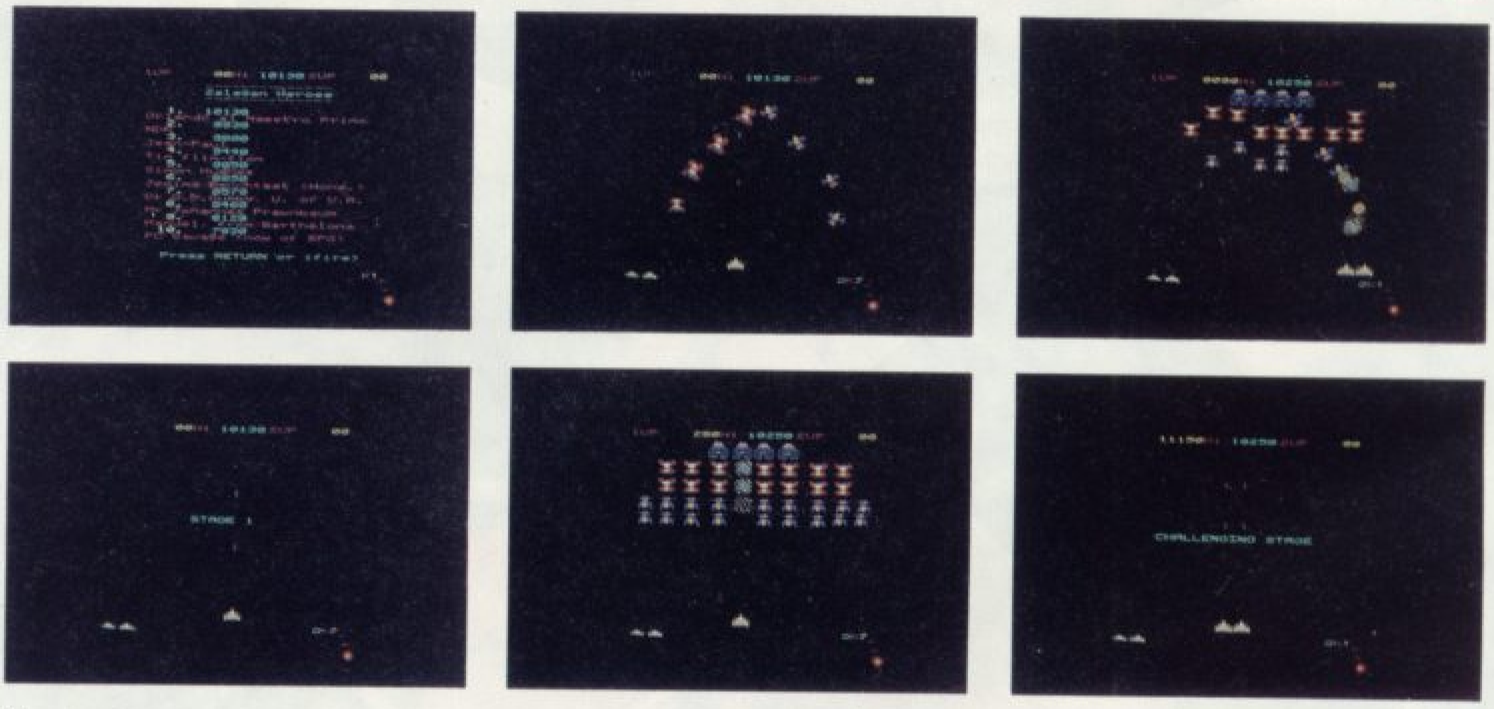

ONLY
£5.50
64
IF YOU OWN A
COMMODORE 64
HERE'S YOUR
CHANCE
to use your Commodore 64 to it's full exciting potential . . .
to experience the fastest, meanest, smoothest most addictive
'shoot-em-up' game ever . . .
to use your determination, skill and will power and battle your
way through level after level, wave after wave of increasingly
vicious and intelligent aliens . . .
to treat you and your Commodore 64 to Arcadia 64, once
your're hooked, you'll understand why it's the best
selling home computer game in the U.K. . . .
Available at W. H. Smith, John Menzies, Boots
and our nationwide dealer network
Imagine
..the name of the game
5 Sir Thomas Street
Liverpool, Merseyside L1 6BW
Dealer Enquiries Contact:
Colin Stokes on 051-236 8100 (20 lines)

ORLANDO'S BACK!

ZALAGA

Aardvark Software, creators of the Ultimate Atom Games, bring you NOW

THE ULTIMATE BBC SPACE-GAME



Seated at your computer, streams of multi-coloured aliens swirl past your laser-base into formation. The first squadron appears harmless, but later waves will avenge the deaths of their comrades with increasing ferocity. To combat the swooping bomb dropping meanies, you may try to link up a pair of laser-bases and **double your fire power!** Your progress through successive phases will be rewarded by challenge stages, where large bonuses may be earned. The game builds up to a dizzying crescendo of high speed motion where instant reflexes and pure technique are your only hope of survival. . .

One or two player game • Keyboard or joystick • Sound on or off • Escape facility • Works on all OS's and Tubes • Ten name Hi-score table • Mode 2 full colour graphics • Continuous rolling twinkling stars • Multiple missiles • Full screen action • Attractively packaged in a collectable library case • High quality cassette • Full instructions • For BBC model B or A + 32K •

Send cheques/P.O.s for £6.90 to

Aardvark Software,
100 Ardleigh Green Road,
HORNCHURCH, Essex.

FRAK coming soon . . .

AT LAST, A HOME COMPUTER THAT IMPROVES WITH AGE.



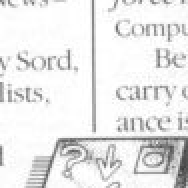
It's surprising how many first-time relationships with a home computer go sour with age.

You buy an attractive, discounted little machine so that you and the children can learn about computers.

Instead, you learn about its limitations: the dull graphics. The plugs that fall out. The cheap power supply. The unalterable "beginners" language. The stiff, fragile keys. No provision for future developments. If only you'd looked around a bit in the beginning... *"Quality costs a little more, but it's usually worth paying for"* (Personal Computer News – CGL M5 Review, June '83.)

The CGL M5 is designed and built by Sord, one of Japan's leading computer specialists, with three main ideas in mind.

First, to be easy and fun to learn and operate.



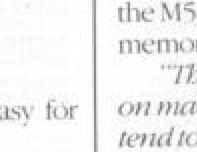
Second, to be rugged enough to last through hours and hours of operation.

And third, to form the basis of a powerful, versatile home computer system that won't need replacing until you're ready for a dedicated business system.

Built to learn

The CGL M5 is designed to be easy for non-geniuses to use.

"On the M5, most of the work is done for you, and all that is left is the need to work out what to do next, rather than how to do it." (Personal Computer News, June '83.)



If you make a mistake, you can correct it with a simple movement of the cursor. So you only correct that mistake, not a whole line; nor do you have to indulge in complex edit commands.

Budding video game designers and computer artists will love to get their hands on the 16 colour graphics and 32 moveable images called "sprites."

"The M5 makes professional graphic effects very simple for even the beginner to achieve." (Personal Computer World, Aug. '83.)

Built to last

"It works first time, doesn't need a lot of mollycoddling and jiggery-pokery to persuade it to continue to do so, and what's even better, it continues to work well. You don't have to balance cold cartons of milk on the top, shove matches in the back to keep the plugs in, or press the keys with several pounds force to make them respond." (Personal Computer News, June '83.)

Being able to build things that work and carry on working without endless maintenance is something at which the Japanese seem to excel.

Built to grow

To be truly versatile, a home computer has to understand very different things.

So you need different "languages," which the M5 provides by supplying part of its memory in plug-in cartridges.

"The M5 eliminates the worst limitations on machines at this level, which is that they tend to be stuck with whatever language is provided by the management." (Personal Computer News, June '83.)

The computer is supplied complete with a Basic-I cartridge, a standard integer BASIC language and a simple learning text.

Plug in the Basic-G cartridge, and you can access the M5's incredibly sophisticated graphic and sound capabilities which are far in advance of similarly-priced computers.

Move on to the Basic-F cartridge, and you have scientific, technological and statistical computing power usually available only on big computers with equally big price tags.

The FALC cartridge provides a tailor-made language for data management, spreadsheet accounts and business problems. Combine FALC with a disc and you could *"turn the M5 into a small business machine"*. (Personal Computer Magazine, August '83.)

Now, take a look at the back of the M5.



Notice the sockets (usually an extra) for a standard Centronics-type printer, the separate video monitor and hi-fi sound output.

Even the language cartridge socket has hidden potential:

"Unlike most such sockets, this one has 56 internal lines connected to it giving access to just about every function in the computer. This means that just about everything you can think of can be added onto the computer, ranging from a Prestel interface to second processor to use as an intelligent terminal on a timesharing computer". .. (Electronics – The Maplin Magazine, March '83.)

Take a look at the home computer that will improve with age.

For a full technical specification of the CGL M5, details of the wide range of supporting software and to find out where to see a complete demonstration, send the coupon to: CGL, CGL House, Goldings Hill, Loughton, Essex IG10 2RR. Telephone number: 01-508 5600.

I'd like to know more about the CGL M5. Please send me a brochure and a list of dealers.

Name____________________

Address____________________

CGL M5 HOME COMPUTER

BUILT TO LEARN. BUILT TO LAST. BUILT TO GROW.

VISION STORE

South London's Largest Software Centre

For all your software requirements





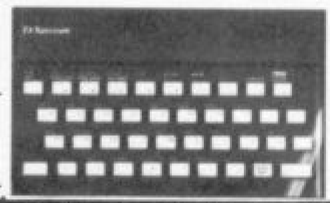
Come to Vision Store

We stock over **1,000** programs on cassette, cartridge and disk for all these Micro's.

Atari. VIC-20. Commodore. BBC. Sinclair Spectrum. ZX-81. Dragon. ORIC. Texas. Epson. New Brain.

1st





Come in and look around. We have continuous demonstrations in our computer showroom.

We stock South London's largest ranges of computers, printers and disk drives.

We have software for all applications: Arcade Games, Adventures, Educational, Business, Utilities, Computer Languages etc.

Try us first. We are always the first to get the latest releases.

Mail Order/Export — send for our comprehensive list.

Ask about our credit facilities.

VISION STORE

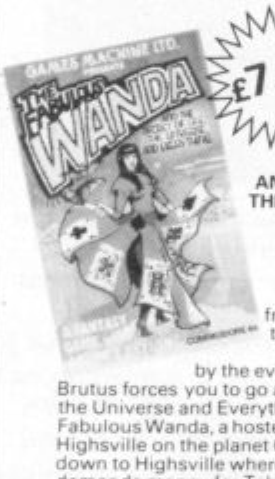
3 Eden Walk Precinct,
Kingston-on-Thames, Surrey.
Tel: 01-546 8974

New Super Store JUST OPENED
96-98 North End,
Croydon, Surrey
Tel 01-681 7539

GAMES MACHINE

AVAILABLE AT ALL SPECTRUM SHOPS, HMV, SELFRIDGES, JOHN MENZIES, LEISURE ZONE AND ALL GOOD COMPUTER SHOPS.

STAND 109 NORTHERN COMPUTER FAIR NOVEMBER 24-26



£7.95

THE FABULOUS WANDA AND THE SECRET OF LIFE THE UNIVERSE AND EVERYTHING *for COMMODORE 64*

An adult fantasy game with Arcade Action

You are travelling far from home looking for good times around the Universe, when you are intercepted by the evil Brutus of the Federation. Brutus forces you to go and seek the Secret of Life, the Universe and Everything - known only to the Fabulous Wanda, a hostess in the Spaced-Out Inn in Highsville on the planet COPUS. You are teleported down to Highsville where the Customs man demands money for Teleport Tax. There is a video game in the Terminal with 3 credits left.
Now you are on your own and you must decide how to proceed to Highsville Mainstreet to find the various establishments to enter and ......

OGLES for BBC/B

Designed with people of all ages in mind this programme provides an aid to learn and match colours as well as being very entertaining. Not only have colours to be matched in sequence but co-ordination skills can be developed by moving the correct coloured OGLE to match a pattern displayed on the screen. Interest and amusement are provided by you as Gordon having to control your pet dog Flash by guiding him to collect the matching OGLE, carry it back and to drop it at the correct position.
There are two levels of play.
An easy level for the younger person.
A professional level for the older person with play against the clock and Hall of Fame.
OGLE COMPETITIONS ARE FUN! £8.95

BARRELDROP! ***for 48K SPECTRUM***

Poor Gordon! His drainpipes are blocked again and the only way to clear them is to drop barrels down them. Gordon stands on the top of his roof with 5 barrels. When the game starts he'll roll one down the roof. Press ***SPACE*** to drop it through the roof accurately into the centre of a drainpipe and you'll score the number of points in the pipe, which will start to flash, and Gordon will get the barrel back for another go. The barrel will be lost if the drop is inaccurate, or into a pipe already filled, but - Flash the dog is on hand! If you know you're gojng to lose the barrel and you can see Flash peeping out from the bottom-right corner, press ***D*** and Flash will save it! Once you clean all 5 pipes, you will get a bonus, but there's a surprise in store before you get the next set of pipes to fill **£5.95**

SUPERSNAILS for 16K or 48K SPECTRUM

Snails specially imported from West Africa are being kept in Dr. Van Winklehoff's laboratory for genetic experiments. The Doctor has turned them into a super-breed of snail who now leave behind a trail of super glue that will trap any snail touching it. Two of the snails, continually moving and controlled by the players, escape from their pens into the laboratory. Unfortunately, only one of the snails can escape from here into the outside world without raising the alarm. You must therefore trap your opponent and then try to escape through the small door which will then appear.

Features:-
* Fast Action - 100% Machine Code
* Nine levels of difficulty
* Keyboard or Joystiɛk Control

£5.95



£7.95

EGBERT *for COMMODORE 64*

A fast Arcade Action Game for all the family to play.
Written in 100% Machine Code for super-fast action!
Egbert works on the production line at 'LEYSPACE'. It was a comfortable life until the invasion of the TEBBITES from the planet TOR. Egbert's union has been exterminated and the Tebbites have left their deadly Pets running wild in the workplace. As if that wasn't enough, the evil invaders have forced Egbert to take care of an Egg - damaging the Egg will have fatal consequences for poor Egbert. Egbert is now on piecework - can he earn a decent wage? Can he even survive? **WARNING!** You may get an ulcer by playing this game.

SIX LEVELS OF SKILL.*ANYBODY WHO CAN DO LEVEL 6 SHOULD WRITE AND LET US KNOW!*

ARITHMETIC FUN-TIME for TI99

Elementary addition, subtraction, multiplication and division exercises providng valuable practice and drill for young children who are developing their basic mathematical skills.
Uses colour graphics and sounds to give a good presentation with the sums appearing in large letters on a blackboard.
The Computer plays back sums which the child has difficulty with showing the child the correct solutions. Uses the basic TI99 console. **£5.95**

Games Machine Ltd., Business & Technology Centre, Bessemer Drive, Stevenage, Herts. SG1 2DX.
Telephone: (0438) 316561.

Please add 50p to cover post and packing.

I enclose a cheque P.O. payable to GAMES MACHINE LTD., for £ ______

or debit my Access/Barclaycard account no. ______

Signature ______

NAME ______

ADDRESS ______

	QTY.	£
WANDA		
BARRELDROP		
EGBERT		
SUPERSNAILS		
OGLES		
ARITHMETIC		
TOTAL		

SEND TO:-

GAMES MACHINE LTD.

**FREEPOST,
STEVENAGE,
HERTS.,
SG1 2YH.**

DEALERS AND DISTRIBUTORS REQUIRED. GAMES AND EDUCATIONAL PROGRAMMES WANTED FOR ANY HOME COMPUTERS.

Write to me at Bug Hunter, Computer and Video Games, Durrant House, 8 Herbal Hill, London EC1R 5EJ. Or 'phone me on 01-278 3881.

Remember that all programs printed in the magazine are worth £10 to the authors. If the creators of last month's Apple program and also Atari's Missile Attack could contact me I'd like to hear from you!

SOUND ADVICE

Hints for the Atari still flood in thick and fast.

This one comes from Adam Davis of York. He says that typing POKE 54018,52 will enable you to start the cassette recorder just by pressing play. This saves you having to type CLOAD. You can then access the heads easily for cleaning, or play music through your TV speaker. (The light program, perhaps?)

VIC BEEPS

Chris Bond of Selby, North Yorkshire, sent me this Vic tip which should run on any model.

It will sound a beep whenever a key is pressed, similar to the Atari keyboard. This saves you having to look up to check whether the key has been registered. Once you have typed in the program and run it, you can type NEW but the beeps will continue.

```
10 FOR T= 0 TO 65:READ N: POKE 828+T,N: NEXT T
20 SYS 828: REM this turns on the beeps.
30 DATA 120,169,3,141,21,3,169,73,141,20,3,88,96,165,197,201,64,208,3,76,191
40 DATA 234,120,169,92,141,20,3,88,76,191,234,169,13,141,14,144,166,87,232
50 DATA 169,208,141,12,144,224,16,208,12,162,0,142,12,144,120,169,73
60 DATA 141,20,3,88,134,87,76,191,234
```

HORACE AND THE BUGLETS?

There seems to be even more buglets creeping into professional software. After Jetpac and Arcadia, here's one from Horace and the Spiders — again for the Spectrum.

James Mortleman writes from South Woodford, London, that if you walk backwards on the first sheet after clearing just a few of the obstacles, you will find yourself on screen 2. Useful, eh?

VIC TIPS

Remember that Vic tip from last time about SYS 256 being equivalent to LOAD? I know it isn't, but P. O'Connell from Whickham has sent me this routine which will allow SYS 256 to act as LOAD.

```
10 DATA 169, 1, 162, 1, 160, 255, 32, 186, 255
20 DATA 169, 0, 162, 255, 160, 255, 32, 189, 255
30 DATA 169, 0, 162, 255, 160, 255, 32, 213, 255, 76, 31, 19
40 FOR X=0 to 29: READ B: POKE 256+X, B: NEXT
```

and then use SYS 256 for LOAD.

BBC CHEATS

BBC tips have been quite scarce in Bug Hunter, so let's remedy that with this offering from Hardy Dore of Queens Park, Bedford.

Here's a way of cheating on Planetoids. If you're legal, decent, honest and truthful then don't read on. If you're not, press BREAK, type PAGE=&3COO (return) and LOAD "Plantl" (return).

When the program has loaded, enter line 150 ?&276B=&99 and then RUN. You now have 99 lives!

BUGGED 'PHONE

I often get telephone calls on the Bug Hunter 'phone (01-278 3881) saying "I've checked this program through a dozen times and it still won't work."

I inform the caller that many readers have had this game working that in most cases I've actually played it myself before it was printed — but I still cannot convince the caller of his or her error.

So you may be interested to read this letter from a reader in Essex.

"I recently wrote to you regarding a possible bug in the Ladder Maze program. I have now found that it was my typing that was at fault. I had typed a full stop instead of a comma at line 960.

Many apologies for this. Although I had checked my listing several times I had overlooked the error every time."

See, it's not always our fault! But even so, I'll still try to help you if you call me during office hours.

ZX CHEATS TOO!

For ZX81 owners, if you were envious of this month's cheating exercise for the BBC, here's one just for you.

It comes courtesy of D. Howie of Bedford — who tells me a way of breaking into auto-run cassettes. As to why anyone should want to stop a game from auto-running I cannot think, but here it is anyway!

Simply type FAST, (N/L) and then RAND USR 836 (N/L). This is similar to LOAD. Start the tape playing and all should go smoothly. Once loaded, you can list or run the program (so he says).

SUBSTRIKE — TEXAS

It may be going back a bit, but you may be interested to know why that Substrike program which which you copied from June's issue for your TI99/4a didn't work. In line 1010, replace A=D1X with A=A+D1X and you should be able to move correctly.

PINBALL — SHARP

A minor bug crept into November's Pinball program for the Sharp. After the second quote marks on line 766, add a colon and then GOTO 780.

BY ROBERT SCHIFREEN



ORIC-BARREL

The Oric program from November's issue, Toll out the Barrel, was printed in capitals, which made a few characters look rather odd. Line 500 is confusing. It should say . . . B=B-40.

MANIC PHONES

Many thanks to Andrew Latham for the detailed description of how to get past the telephones in Manic Miner. I'll let you know if I manage it.

C&VG YEAR BOOK

The *Computer and Video Games Yearbook* for 1984 is now on sale, but unfortunately it has not escaped the infiltration of Mal and his team.

The Atari versions of Pirates and Polyps and Interstellar Intrigue both seem to be causing you lucky readers who have already got their hands on a copy some problems. If you drop us a line, enclosing an SAE, we'll put you right. The same goes for the Spectrum version of Pirates and Polyps. Please mark your envelope with the name of the program which you are interested in.

Well, that's it for another month. Don't forget that you can always talk to me about your computer problems on 01-278 3881. I've just had one of those posh answering machines fitted to the bug phone so if you are suddenly struck by a bug in the middle of the night or at the weekend you can leave me a message. You may also find that the machine is on during the day if I'm tied up with the dreaded Seventh Empire — someone has to type all your moves into the computer! — but leave me a message and I'll call you back.

THE SEVEN

TRADING COMPETITION

Welcome back again to the Seventh Empire — let's start with the result of the trading competition.

This is the part of the game which anyone can enter, even if you're not a registered player in the game.

The idea is to predict which star will have the highest trade index for the coming turn.

The highest value this month is at Jadeg, which notched up a trade index of 1050. Unfortunately no one managed to predict this, so the prize goes back into the hat yet again.

The trade index is calculated by the computer monitoring the number of merchant fleets arriving at and leaving a star system.

Traders coming to the start system are the sellers, and those leaving are the buyers.

Each star also has a trade value. Hearts are elixir stars and are worth 200 points. Diamonds are gem stars and are 150 points. Asterisks are energy stars (100) and circles are gateway stars (50 points).

The equation you need is . . . Trade Index = Trade Value X(buyers/sellers). If you can predict which star will have the highest value, then there'll be some free software in it for your micro.

You'll have to act fast, though. Next month is the last turn of the game.

Send your entry in on a postcard or stuck-down envelope to Seventh Empire Trading Competition, *Computer and Video Games,* Durrant House, 8 Herbal Hill, London EC1R 5EJ.

THE TOP SCORERS

The title of Hero of the Month for turn five goes to M. Walsingham of Surbiton, Surrey. He managed to clock up 4,250 points this turn. He must be fast approaching the top overall score which currently stands at 9,449 for all five turns.

Second this month is M. Dunderdale of Longton, Preston, with 4,000. The rest of the top ten looks like this; 3rd Alan Sparkes of Havant, Hants (3,750), 4th K. Whitefield, Strood, Rochester (3,730). 5th is A. Jackson from Burnley, Lancs (3,500), 6th A. Taylor of Tarleton, Lancs (3,445), 7th G. Marshall of Redditch, Worcs (3,250), 8th T. White of Haxby, York (3,163), 9th is M. Allen of Fulham, London, with 3,100 and 10th is David Speight from Blackpool with 3000. Congratulations to all.

To find your own profit for this turn, look at the black and white table. Cargo profits are printed normally while plunder profits are white on black.

The names down the left column are the stars travelled from; the star travelled to is printed along the top.

Orders are now due in for turn six. This is the last turn of the game, and the player who comes out on top overall next month will be announced the grand winner. The lucky player will receive a brand new ColecoVision games centre.

Orders must be in by Friday 25th November. I keep a list of any orders which arrive too late to be included, so if you think that your moves may have been late give me a ring on the special phone number and I'll let you know.

If you are desperate, you can phone your moves in to the Bug Hunter answering machine, but ONLY during the weekend after the closing date. Your moves will then be added to the list on Monday morning.

	As	Ba	Ca	Du	Er	Fa	Ga	He	Ix	Ji	Ko	Li	Mu	Nu	Op	Pu	Qa	Ri	So	Tu	Us	Va	Wi	Xu	Yu
Asol			1000	1000	333	500		1000			166					1000		100				1000			
Barov	250		500						500	1000					1000	1000		500	166		1000		1000	1000	166
Cazuv	500	500		250	1000		1000	1000			111		1000				1000		333			1000			
Dusup	333		1000		1000	333		1000		1000	1000	333									1000	83	333		1000
Erak	250		500				500	166				1000	500	1000		250	1000		250						1000
Fadis	1000		1000	1000				1000	1000		250	500			250			1000		1000		250	1000		
Gazor	1000	1000	333			1000				1000	500	166				1000	1000							333	
Hezod	1000											500	250			500	500	500	500						1000
Ixip				250	333	166					250		250					200			1000	333			
Jinis	333	1000				1000	1000									1000	1000		1000						
Kolol	125			250	250	250		1000					1000	250		1000		333	1000	500	333				
Lizag	1000		1000		500				1000	1000			1000		1000		1000		1000	1000				1000	1000
Mupip	1000	83	500				500	1000						500			1000	1000						1000	
Nuzet	500				500	500	1000		500	333	83		500		500				1000				1000		500
Opod			1000				333				1000		333				1000			125			1000	500	
Pulud			1000		333				1000			250		1000						1000				500	
Qavuv				333				500		166		250			1000			125	333	1000					
Rivev	1000					166			250		500			1000											
Soner	166	333	500				1000				1000	1000	1000	333	1000		1000			1000	1000	1000			
Tubox		1000			250			250	1000			250	1000			1000	1000							1000	
Usugx	500		500			500		1000		500	333	1000	166	333		1000				1000		1000			1000
Vasux	1000		1000			500				500			1000	166	1000	1000		500					333		
Widan					1000		1000	1000	250		250	500		500		250									
Xugod			1000		333		500	250			250	500	250		250	250			1000						
Yuses	1000		125		1000		1000	500		1000	1000	500		500	1000	100		1000			62				

	Compare new star to the star you left	Moving orders
MOVE:	Does it belong to a **friendly** empire? Is it 1 square away, either vertically, horizontally **or** diagonally?	
TRADE:	Does it belong to a **friendly** empire? Is it 1 square away, either vertically, horizontally **or** diagonally? Is it a **different** star **type?**	
RAID:	Is it 1 square away, vertically or horizontally but **not** diagonally?	Is it the **first** movement phase?
	Does it belong to an **alien** empire?	Is it **followed** by a Return order?
RETURN:	Is the fleet Returning to a star belonging to the **same** empire as it left on the first movement phase?	Is it the **second** movement phase?
	Is it 1 square away, vertically or horizontally but **not** diagonally?	Does it follow a Raid order?
ATTACK:	Does it belong to an **enemy** empire?	If it's first movement phase, is it followed by a Stay order?
	Is it 1 square away, vertically or horizontally but **not** diagonally?	If it's second movement phase, did fleet move in its own empire on first movement phase?
STAY:	Is fleet staying at present star?	Was your first order anything but a Raid order?
CARGO, JUMP AND PLUNDER:	Does fleet start game turn at a Gateway Star?	Has it only one order over both movement phases?
	Does it move to a Gateway Star?	Is the other movement phase crossed out?
	Is it a different Gateway Star?	

Friendly = Empire which a fleet's current empire is **not** at war with.
Enemy = Empire which a fleet's current empire **is** at war with.
Same = **Same** empire as the one you've left.
Alien = A star belonging to an empire **other** than the one you left.

The Checklist Chart is one way of ensuring that you have not entered an illegal order which may result in one of your fleets becoming lost in space.

Whatever movement orders you have given each of your seven fleets, they should be checked against this chart. And if you can answer "Yes" to each of the questions set out there, then the move is a valid one.

If you come up with a "No" then the order is illegal in that context. In order to prompt "Yes" answers, some of the questions are phrased in an unusual way.

TH EMPIRE

BATTLE REPORT

There were 23 battles this month. Once again the defenders held out against the few attackers. Battle bonuses were all zero, except at Zapus (−2) and Girix (−3). The raid penalty for this month is again 1.

The Imperial Ships are positioned like this... D'Taans science Empire ship is at Soner and is now controlled by player 3201. The Sun Ship it at Widan is belongs to player 1781. The Pirate Ship was not moved last time, but can now be moved by player 2064. Bloodline is at Gazor (player 1780), Dead at Yuses (2300), Amethyst at Usug (player 1877) and Water at Mupip (2182).

COMMAND A SPACE TRIBE

The Galaxy of the Seventh Empire is torn by war and piracy. The merchants are as coldly calculating as the war fleets and the seven ruling empires earn and expect no loyalty from the thousands of tribes that inhabit the galaxy.

Playing off one warring empire against another, a cunning commander can keep his tribe in profit. But he must keep a close eye on the way the diplomatic wheels are turning and how other tribes' fleets are likely to respond.

He must know when to plunge into the risks of battle and try to alter the galactic map and he must use the space-jumping Gateways wisely, running merchandise or trading the profitable routes.

FOZUZ ○ 251 0	LARUB ♦ 222 0	YIBET ♦ 263 0	XOLIP ♥ 259 0	ITIL ♥ 206 200	FUNUS ♥ 230 150	LULIP ♦ 222 180	YANOK ♥ 259 400	XOKEG ♦ 220 150	ISOX ○ 211 0
VIZAX ○ 218 500	QIRUS ♥ 217 200	HAZAN ♦ 243 50	ABOB ○ 236 200	SONER * 379 37	VEPOZ ♥ 211 88	QATOT ○ 241 118	HEZOD * 407 100	ASOL * 410 40	SUXEK ♥ 227 142
BAROV * 321 37	WIDAN * 312 90	RURUS ○ 240 62	MUPIP * 345 45	NAXIG ○ 218 100	BETID ♦ 214 83	WAVAB ○ 226 100	RIVEV * 361 12	MEGUD ○ 218 150	NABOK ○ 211 116
DALIX ♥ 225 400	OLEX ♥ 253 142	TASAT ♥ 252 66	CAZUV * 300 50	GOVAX ♥ 226 480	DITUG ♦ 252 90	OKAP ♥ 268 300	TOXAZ ♦ 201 330	CIXAN ♦ 240 56	GOTEG ♥ 222 100
ERAK * 322 75	KOVEP ♦ 218 233	USUG * 371 50	PEBOB ♥ 299 160	JADEG ♦ 236 1050	ENAK ○ 256 77	KEPAR ♥ 234 50	UGON ♦ 234 120	POROV ♦ 224 75	JINIS * 304 125
FADIS * 329 33	LOKIK ♥ 248 150	YUSES * 327 62	XAPUS ○ 223 30	IXIP * 390 100	FAGIL ♥ 246 160	LIZAG * 351 62	YODAZ ♦ 227 75	XUGOD * 358 0	IBED ♥ 246 200
VASUX * 319 16	QUXIN ○ 214 137	HIPEB ♦ 244 283	ASOR ○ 250 58	SIDAL ♥ 239 171	VIZET ♦ 265 37	QAVUV * 384 57	HAKUB ○ 227 300	APEL ♦ 268 88	SABAG ♥ 244 200
BUREP ♥ 209 600	WAGAP ♥ 213 100	ROLEK ♥ 256 200	MINEP ○ 218 116	NUVEX ♥ 261 169	BAZIX ○ 233 100	WUPIV ♥ 216 0	RORUL ♥ 268 200	MEDEN ♦ 224 550	NUZET * 345 25
DUSUP * 306 0	OPOD * 309 133	TUBOX * 306 70	CIGER ○ 230 45	GAZOR * 432 216	DABAG ♥ 235 0	OTAN ♦ 230 105	TUXUX ○ 209 116	CESER ♥ 224 92	GIRIX ♦ 212 225
ELAR ○ 222 200	KERUP ♦ 267 56	ULEB ♥ 206 200	PIRAD ♥ 239 127	JAXEL ○ 245 300	EDIB ♦ 215 0	KOLOL * 355 10	UKOP ○ 210 150	PULUD * 346 200	JUVAK ♦ 219 250

The Galactic Map

Orders in Block Caps please

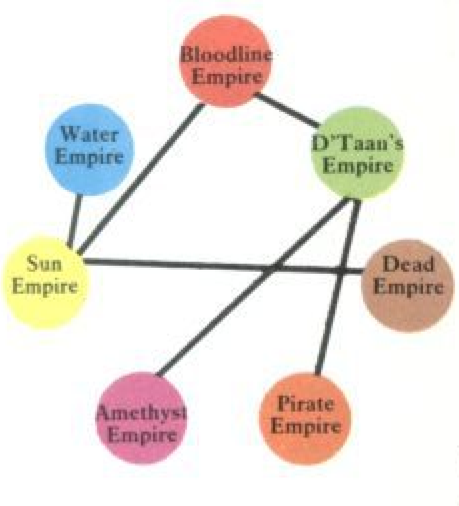
Name: ....

Code No: .... Telephone No: ....

	AT	1st Movement phase ACTION	1st Movement phase STAR	2nd Movement phase ACTION	2nd Movement phase STAR
FLEET 1					
FLEET 2					
FLEET 3					
FLEET 4					
FLEET 5					
FLEET 6					
FLEET 7					

I wish to move the .... Empire's Imperial Ship from .... to ....

Please notify us separately of any change of address.



The Diplomatic Diagram

For big softies

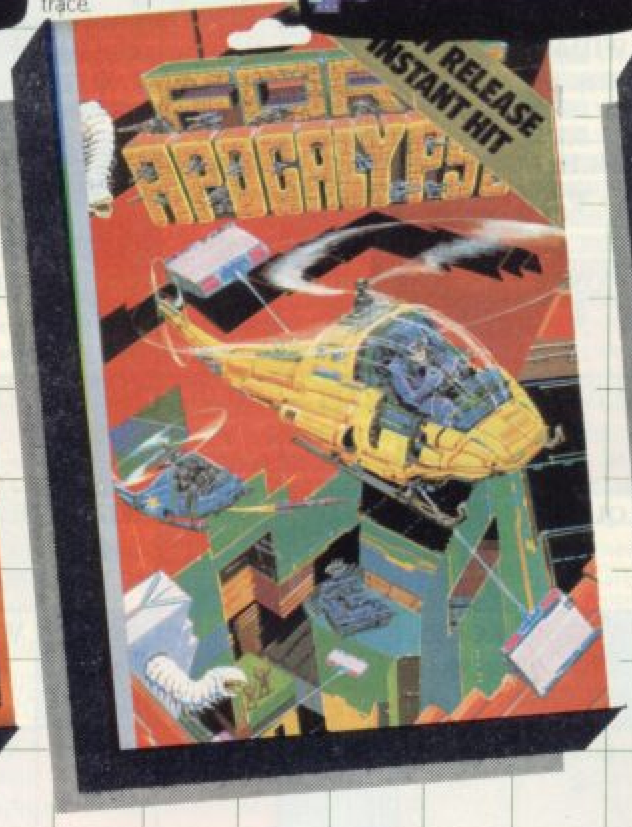
MOON SHUTTLE
ATARI-COM 64
As the pilot of this spectacular Moon Shuttle flight, you repeatedly encounter unexpected dangers as you blast through asteroids, bomb launchers and man 'o' wars.



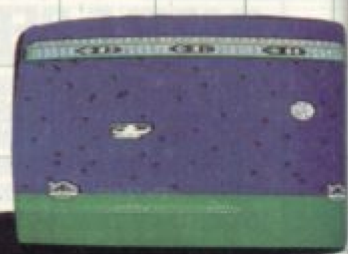


FORT APOCALYPSE
ATARI-COM 64
The warlords of KRALTHA have constructed a prison so deadly that all who have attempted to penetrate it have vanished without trace.





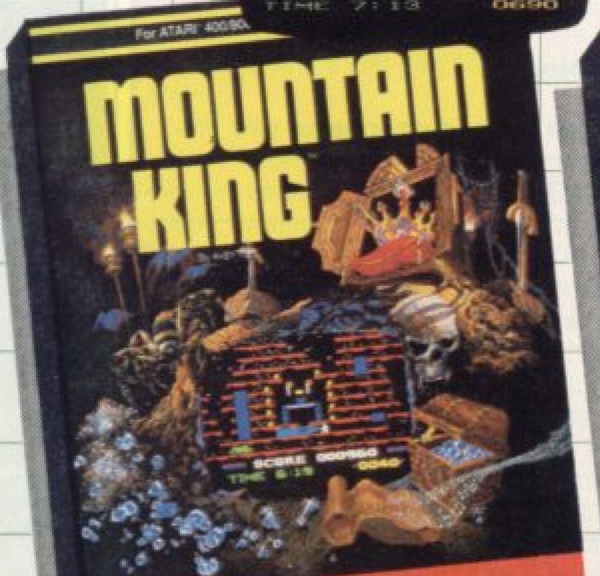
CHOPLIFTER!
ATARI-COM 64
Most of us would like to be heroes. Trouble is we're often not properly prepared when the chance to do something heroic comes along. This is your chance.





MOUNTAIN KING
ATARI
Rampaging bats flap by trying to steal back the Flame Spirit you have just acquired, and the giant spider lurks to snare you in its web.





WIZARD OF WOR
ATARI
Can you defeat the Wizard of Wor? A host of monsters both visible and invisible, a changing pattern of mazes, and the wizard himself to contend with.





BLUE MAX
ATARI-COM 64
You are the Blue Max of the R.A.F. in command of a bi-plane fighter/bomber. Your mission is to pulverise the enemy's airfields and bridges. But watch out for the enemy fighters!





Atari 400/800® software

Dealers!—for information on how to become a CentreSoft stockist:
Write to CentreSoft House, Unit 16, Tipton Trading Estate, Bloomfield Road, Tipton, West Midlands DY4 9AH or telephone 021-520 7591.

-everywhere!

When it's a Number 1 hit in Houston—we're already selling it in Euston! CentreSoft cream the best of U.S. and British software and rush it through our Nationwide network within days of launch date. If it's new, if it's exciting, if it's the best, CentreSoft put the action on your High Street!

You can buy with total confidence from any of the CentreSoft retailers below because we guarantee replacement—free of charge—on any faulty media.

If you haven't bought your own Home Computer System yet, all of the retailers shown carry a big choice of Hardware. Why not call in, for a quote, and a 'hands on' test run?

ALL THESE AND MANY MORE AVAILABLE AT:

GAMES WORKSHOP LTD.
95 The Moor, Sheffield. (0742) 750114.
41a Broad Walk, Broadmarsh Centre, Nottingham. (0602) 585744.
162 Marsden Way, Arndale Centre, Manchester. (061) 832 6863.
Unit 37, West Court, Birmingham Shopping Centre, Birmingham. (021) 632 4804.

ENGLAND

AVON

Brensal Computers
24 Park Row, Bristol. (0272) 294188.

Radford Hi-Fi Ltd.
52 Gloucester Road, Bristol. (0272) 428247.

EAST ANGLIA

Brainwave
24 Crown Street, Ipswich, Suffolk. (0473) 50965.

Brainwave
51 Head Street, Colchester, Essex. (0473) 50965.

GREATER LONDON

Godfreys Computer Centre
28-32 East Walk, Basildon, Essex. (0268) 289379.

Alpha Scan Ltd.
Chester House, Windsor End, Beaconsfield, Bucks. (0494) 671259.

3D Computers
30 Station Road, Belmont, Surrey SM2 6BS. (01) 642 2534.

3D Computers
11A Gunnersbury Avenue, Ealing, London W5 4HB. (01) 992 5855.

Videola
535 Green Lanes, Harringay, London N8. (01) 340 3432.

Trionic
144 Station Road, Harrow. (01) 861 0036.

Vision Store
3 Eden Walk, Kingston-Upon-Thames, Surrey. (01) 546 8974.

REW
114-116 Charing Cross Road, London WC2 0JR. (01) 240 3386.

Videola
6 Pages Lane, Muswell Hill, London N10. (01) 883 3889.

Vista Video
28 Tottenham Court Road, London W1P 9RB. (01) 580 9098.

Landau Electronics
Lion House, 227 Tottenham Court Road, London W1. (01) 637 3024.

REW
230 Tottenham Court Road, London WC1P 9AS. (01) 637 2624.

Micro C
Units 91-93 Arndale Centre, Luton, Beds LU1 1TB. (0582) 425079.

Galaxy Video
60 High Street, Maidstone, Kent. (0622) 679265.

3D Computers
Unit 1, Heathfield, Stacey Bushes, Milton Keynes MK12 6HP. (0908) 31782.

3D Computers
26 Stanley Road, Newbury, Berks RG14 7PB. (0635) 30047.

3D Computers
Greystone Works, The Green, Croxley Green, Rickmansworth, Herts WD3 3AJ. (0923) 779250.

Silica Shop Ltd.
1-4 The Mews, Hatherley Road, Sidcup, Kent DA14 4DX. (01) 301 1111 or (01) 309 1111.

Ace Software
94 Western Road, Southall, Middx UB2 5DZ. (01) 574 4098.

Computasolve
8 St Marks Hill, Surbiton, Surrey. (01) 390 5135.

3D Computers
230 Tolworth Rise South, Tolworth, Surbiton, Surrey KT5 9NB. (01) 337 4317.

Video City
45-47 Fishers Green Road, Stevenage, Herts. (0438) 53808.

Modata Computers Ltd.
30 St Johns Road, Tonbridge Wells, Kent. (0892) 41555.

The Advanced Technology Centre
207 Eltham High Street, Eltham, London. (01) 859 7696.

Datastore
Victoria Road, Hailsham, Sussex. (0323) 846777.

MIDLANDS

Computer Plus
2 Church Lane, Banbury, Oxon. (0295) 55890.

Calisto Computers
119 John Bright Street, Birmingham. (021) 632 6458.

Micro C
5-11 Martineau Way, Union Street, Birmingham B2 4UJ. (021) 233 1105.

C T Electronics
2 The Spot, Derby. (0332) 360456.

Gordon Harwood
69-71 High Street, Alfreton, Derbyshire. (0773) 832078.

Mays Hi-Fi
57 Churchgate, Leicester. (0533) 22212.

Movies Computer Centre
5 Church Street, Melton Mowbray, Leicester. (0664) 61169.

Vista Video
50 Friar Lane, Nottingham NG1 6DQ. (0602) 418400.

Foxs Computer Centre
38-40 Upper Parliament Street, Nottingham. (0602) 410926.

Carvells
3-7 Bank Street, Rugby CV21 2QE. (0788) 65275.

Greens'
23 Market Way, Coventry, West Midlands. (0203) 28342.

Arnolds (Corby)
45 Corporation Street, Corby, Northants. (05366) 3645.

The Gamekeeper
Grand Fare, 224 High Street, Erdington, Birmingham. (021) 384 6108.

NORTH EASTERN

Photosave
18 Cheapside, Bradford DD1 4JA. (0274) 308598.

Bass + Bligh
4 Lower Briggate, Leeds. (0532) 454451.

The Computer Shop
Unit 25 Handyside Arcade, Percy Street, Newcastle-Upon-Tyne. (0632) 616260.

York Computer Centre
7 Stonegate Arcade, York. (0904) 641862.

Small Fry + Hobby
51-53 Kirkgate, Wakefield WF1 1HX. (0924) 360551.

Just Micro
22 Carver Street, Sheffield. (0742) 752732.

Com-Tech
6 Eastgate, Barnsley. (0226) 46972.

NORTH WESTERN

Home Computers
234 Church Street, Blackpool. (0253) 22340.

Cleartone Hi-Fi
156-158 Blackburn Road, Bolton, Lancs. (0204) 31423.

Chester Software Centre
49-51 Book Street, Chester. (0244) 310015.

Microspot
15 Moorfield, Liverpool. (051) 236 6628.

Camera + Computer Centre
118 Mill Street, Macclesfield, Cheshire. (0625) 27468.

Gemini Electronics
50 Newton Street, Piccadilly, Manchester. (061) 236 3083.

Channel 8 Software
51 Fishergate, Preston. (0772) 53057.

Wildings Computer Centre
111 Bridge Street, Warrington, Cheshire. (0925) 38290.

Wildings Computer Centre
11 Mesnes Street, Wigan. (0942) 44382.

Computer Link
21 St. Werburgh Street, Chester. (0244) 316516.

Micro Workshop
273 Moston Lane, Moston, Manchester. (061) 205 4974.

SOUTHERN

Computerstore Ltd.
9-11 Richmond Hill, Bournemouth BH2 6HE. (0202) 296963.

Gamer
24 Gloucester Road, Brighton. (0273) 698424.

Canterbury Software
9 The Friars, Canterbury CT1 2AS. (0227) 53531.

Efficient Chips
40 The Market Place, Chippenham, Wiltshire. (0249) 654321.

G B Microland
7 Queens Parade, London Road, Waterlooville, Portsmouth. (07014) 59911.

Microchips
27 Bedford Place, Southampton. (0703) 38899.

Microchips
46-48 St Georges Street, Winchester. (0962) 68085.

SCOTLAND

The Silicon Centre
6-7 Antigua Street, Edinburgh. (031) 557 4546.

Livingston Computer Centre
17 The Mall, Craigshill Shopping Centre, Livingston. (0506) 36978.

WALES

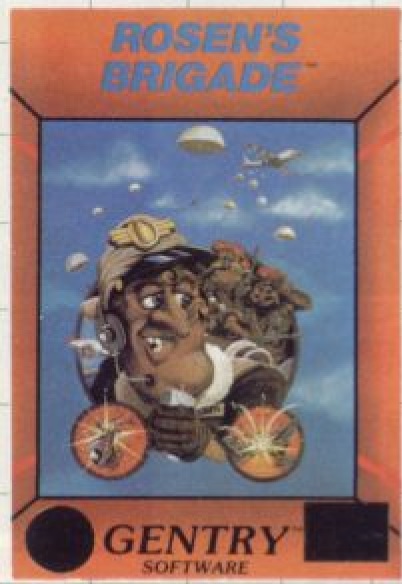
Hi-Fi Western Ltd.
48 Cambrian Road, Newport, Gwent. (0633) 62790.

Clywd Personal Computers
Unit 19, Daniel Owen Precinct, Mold. (0352) 56842.

G P Video
St Georges Crescent, Wrexham. (0978) 264451.

CHANNEL ISLANDS

Audio + Computer Centre
7 Peter Street, St Helier, Jersey. (0534) 74000.



SPECIAL PRICE CLASSIC

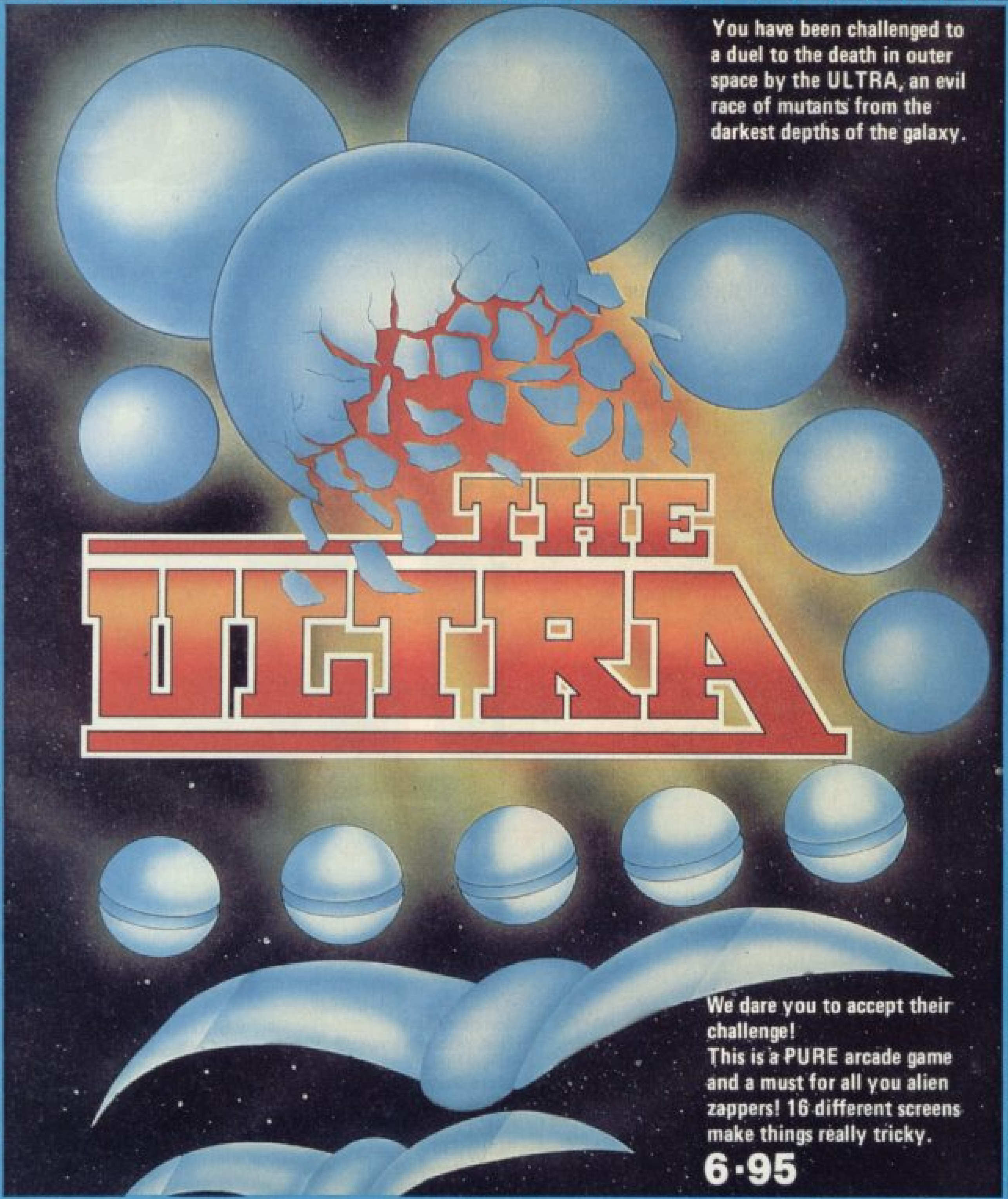
ROSENS BRIGADE
ATARI
The war is on and you must fly behind enemy lines to rescue your fellow flyers. Battle the enemy on land and sea and save your crewmen.

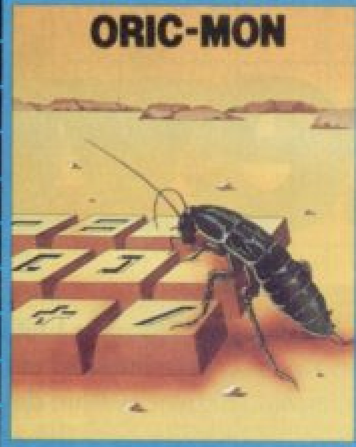
£14·95

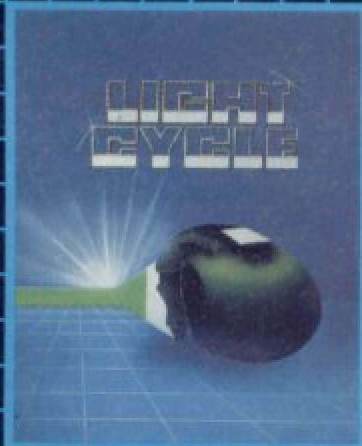
CentreSoft

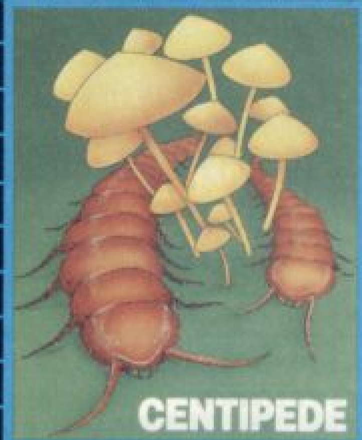
Always top of the softs.

CentreSoft is an independent distributor of Atari compatible software.
Atari, Atari 400 and Atari 800 are trademarks of Atari International (UK) Inc

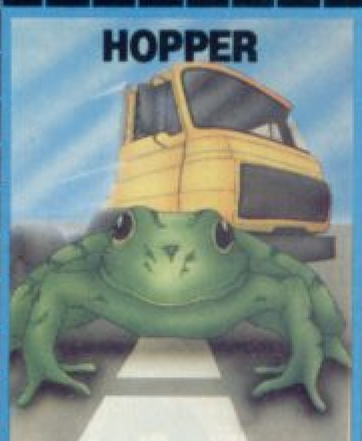












SOFTWARE FOR THE ORIC 1

Approved by Oric Products International.

HOPPER

Help FERGUS and his friends across the highway avoiding the traffic, and then over the treacherous river on the backs of turtles and logs to the safety of the lilly pond.
Features include: 6 lanes of traffic, diving turtles, crocodiles & flies.

6·95

INVADERS

A superb example of this truly classic arcade game. Includes all the features of the original and much, much more.

6·95

ORIC-MON

A complete disassembler and monitor to take the strain off your assembly language programming. Contains all the features of professional monitors found on much larger and more expensive machines.

8·95

LIGHT CYCLE

The MASTER CONTROL PROGRAM has ordered you to race your light cycle on the infamous grid. This is an incredibly fast, adrenalin pumping game that is very addictive. There is an option to race against either another player or the computer – but we warn you its very very good!

6·95

CENTIPEDE

You are caught in a vicious jungle of giant insects. Centipedes are attacking you from all sides. Killer fleas are dropping from the sky, and to top things off there's a venemous spider lurking in the background. You only have your trusty laser cannon as defense.

6·95

AVAILABLE NOW DIRECT FROM P.S.S.

FOR INSTANT CREDIT CARD SALES TEL (0203)667556.
SEND CHEQUE OR P.O.
TO P.S.S. 452 STONEY STANTON RD. COVENTRY CV6 5DG.
TRADE ENQUIRIES CONTACT JOHN FLETCHER, COVENTRY (0203) 81346



This must be the most spectacular arcade action game, ever to be produced on cassette for the 8 or 16k expanded VIC 20.

As captain of a star ship lost in space, you encounter a miraculous force of winged creatures, known to the galaxy as the COSMIC FIRE BIRDS. They loop the loop. They figure of eight. They swoop. They dive, can YOU survive. Full screen display, 99 progressive levels of play, 5 lives, Bonus ship at 5,000 points, swarmers, bombers, leaders, hawks.

This is arcade action like it's never been seen before. 100% M/C. Superb colour graphics and sound.

Available mail order from
51 Meadowcroft, Radcliffe,
Manchester. M26 0JP
Tel: 061 724 8622

£9.95
P&P Inc.

Also available from all good computer outlets.

Other games available for the unexpanded VIC.

Scrambler	M/C	£5.00	Munch Man	M/C	£5.00
Galaxions	M/C	£5.00	Gun Fight	M/C	£5.00
Super Breakout	M/C	£5.00	Asteroyds	M/C	£5.00
Cavern Raider	M/C	£6.00	Galaxions	M/C	£7.95 for Comm-64

ALL ORDERS SENT BY RETURN POST. TRADE ENQUIRIES TO PROGRESSIVE DISTRIBUTION, 83 LEONARD ST., LONDON EC2. 01-729 5411



Grab one quickly for Xmas

Due to the overwhelming demand for these T-Shirts at the 1983 Computer & Video Games/Taitel Arcade Games Championships. We have re-printed a limited number exclusively for C&VG readers.

The T-Shirts are 100% cotton, black with full colour illustration and come in three sizes Small (approx chest size — 34-36) Medium (approx chest size — 38-40) Large (approx chest size — 42-44)

FREE Bugs Badge with every order

They only cost £3.99 (inclusive of P&P), and Cheques or Postal Orders (not cash)should be sent in a sealed envelope to the address below. But remember act today or someone or something could get there before you.

COMPUTER & VIDEO GAMES T-SHIRT OFFER.

Name ....

Address ....

.... Tel: ....

Tick size wanted: S ☐ M ☐ L ☐

T-shirts cost £3.99(inc. p&p). Cheques/P.O's payable to **Computer & Video Games T-Shirt Offer.** Please return this coupon, with your remittance in a sealed envelope to: **Computer & Video Games T-Shirt Offer, P.O. Box 50, Farndon Rd, Market Harborough, Leicestershire.**

Please allow 28 Days for Delivery (Offer applies U.K. only)



Get some real action out of your computer this Christmas with ACTIONMASTER, a new range of superior arcade games from Lothlorien – the people who brought you ROMAN EMPIRE, JOHNNY REB and other famous WARMASTER titles.

Look out for the ACTIONMASTER green striped cassettes at leading software specialists, or buy direct by post at no extra cost. Send the coupon TODAY to ensure delivery before Christmas

NEW **MICROMOUSE.** At last educational arcade action! Fight off the software bugs and help Micromouse de-bug his programs. Datakill available. Fight through the levels to the highest score.

BEDLAM. An asteroid explosion has catapulted you to the asylum planet BOVRYLL where you are under attack from waves of loathsome creatures – each more vicious than the last. Your only hope of survival is to kill each wave with a twin-firing photon bolt, but just when you think you're winning you encounter the sorcerous guards. Can you kill ten to win another life?

BEETLEMANIA. Trapped in a maze with four giant green beetles you are desperate to get out. You can find a way but the lock can only be opened with four giant beetle eggs. Naturally the beetles go berserk when their eggs are stolen. Higher levels offer more complex mazes and fast-moving spiders.

TWO-GUN TURTLE. In the middle of winter a turtle is defending his strawberry patch against a variety of marauding bugs… some go for strawberries, some go for you… some don't go for anything unless they're accidentally attacked. But remember this is winter and you never know when it might snow!

ALL ACTIONMASTER games are 100% machine code and are available for any Spectrum unless otherwise stated.

NEW ADVENTUREMASTER SERIES. First title—The Stolen Lamp BBC-B

LOTHLORIEN

more action for your money

Please send me (tick box)

			Others (please specify)
MICROMOUSE	Any Spectrum	£5.95 □	
BEETLEMANIA	Any Spectrum	£5.50 □	
BEDLAM	Any Spectrum	£5.95 □	______
TWO-GUN TURTLE	Oric 48K	£6.95 □	______
THE STOLEN LAMP	BBC-B	£6.95 □	

I enclose a cheque/PO for £_____ made payable to M. C. Lothlorien

Please debit my Access A/C No._____ /_____ /_____ /_____

SIGNED ______________________

ADDRESS ______________________

____

Send to: M C Lothlorien, Dept. CVC/12/83, 56a Park Lane, Poynton, Cheshire SK12 1AE. Telephone: Poynton 876642.

Can you face 1984 without our Yearbook?



The *C&VG* delivery is a real event in this outpost of the galaxy. It only arrives every other millennia when the comet goes past. But this little alien isn't going to miss out, he's just put in an order for *The Computer & Video Games Yearbook 1984*.

There's enough in it to keep him going for a couple of millennia. He'll be playing the four specially commissioned games, converted across a range of micros.

● He's going to struggle through *The Vespozian Affair*, an adventure set on a research space craft, flying between the planets.

● He and his alien friend may come to blows when playing *The Beacon Star War*. ● Those long fingers may be a handicap when he plays *Pirates & Polyps* an



arcade style game set on a planet surface as a research station tries to track down the valuable polyps before the pirates carry them away. ● Who can he trust when he plays *Interstellar Intrigue*, a game of strategy and diplomacy for up to five players. ● He'll be laughing at a whole load of new Bugs cartoons, Puzzling with Trevor Truran, improving his games writing skills and learning about arcade and video games in a whole range of sparkling features . . . No wonder there's a glint in his eye!

ON SALE NOW! PRICE £2.25



YAHTCEE....This traditional dice is for one or more players and features superb graphics to enhance your enjoyment.

YAHTCEE is Fascinating, Absorbing & Challenging.

SPECIAL OFFER

Order YAHTCEE Today for only £7.95 incl
and get a ten game cassette FREE

ANiK

30 KINGSCROFT COURT
BELLINGE, NORTHAMPTON

TICK BOX FOR YOUR REQUIREMENT.

COM64 | SPECTRUM 48 | DRAGON 32

YAHTCEE

NAME

ADDRESS

TOTAL SUM ENCLOSED

CVG12

YEP FOLKS — IT'S HERE

AVAILABLE NOW
Spectrum 48K
Com. 64

CALIFORNIA

GOLD RUSH



HOWDE DO PARDNERS
This here's Prospector Jake, I sure am havin' one helluva time tryin' to peg ma claim with those damned Injuns a hootin' an a hollerin' all over this territory. Ma job gets harder as I move from one Gold Field to another. I know, that is me an' ma stubborn hornery ol' Mule here know of 24 rich an' I mean rich seams of pure Gold. All it needs to make this here ol' critter happy is that you help me peg every doggone last one of them claims.

Can YOU help Jake become rich, help him peg his claim, dodge the arrows, avoid the tomahawks, and plant the Dynamite in just the right place? . . . YOU CAN!!!

YIPPEE . . . Git yer Picks an' Shovels and join the CALIFORNIA GOLD RUSH . . . NOW

Amazing Arcade Action . . . Stunning Sound and Graphics
Available NOW for Commodore 64, Spectrum 48.

£ 7.95 including P&P

COMING SOON

LEAPIN' LANCELOT: Medieval Machine Magic to enthral you
GALACTIC SURVIVAL PAK: Every Astro-Traveller *must* have this!

ANIK

We always need Dynamic Dealers and Imaginative Writers

Please rush me CGR for (m/c)

TOTAL SUM INCLUDED £
Please make cheques and POs payable to ANIK MICROSYSTEMS
30 KINGSCROFT COURT
BELLINGE, NORTHAMPTON

Name..........................
Address.......................
....
....

SINCLAIR ZX 81 16K
SPECTRUM 48K
BARON
by Simon Mansfield
Baron is a complex simulation game for up to four players.
Step back in time when the country was divided into huge estates.
Could you accept the responsibilities of a Barony? Farm your lands, maintain workers, hire mercenaries, wage feudal wars?
Yearly analysis of success or failure of your decisions.
There are unexpected events in store for you – to find out, why not play the game?
Graphics.

SINCLAIR ZX 81 16K
SPECTRUM 48K
ADMIRAL GRAF SPEE
by Simon Mansfield
An original game of strategy based on historically accurate records of the Graf Spee's formidable presence in the North and South Atlantic.
As her Captain use full graphic instrumentation to calculate speed, compass bearings, fuel, distance, ammunition states: locate and manoeuvre into visual range and destroy enemy ships which can also evade, seek and destroy you! Attacked targets can only be destroyed by the same number of salvos or torpedoes as were necessary for the tonnage during the original action.
7 levels of difficulty.

SINCLAIR ZX 81 16K
SPECTRUM 48K
DUNGEONS OF DOOM
by Simon Mansfield
Two challenging adventure games – to travel through the labyrinths, descending to the lowest dungeons where the treasures are hidden or play "ESCAPE FROM THE UNDERWORLD" and save yourself from incarceration in the dungeons by fighting you way up the endless levels.
Graphics show your position – status reports – different layout with each new game – 4 players can search different levels – 400 rooms – 600 corridors – 1000 locations to explore.
Objective – to score highest points and STAY ALIVE.

SPECTRUM 16K
LAS VEGAS
by Neil Streeter
A Temptation games double.
1. FRUIT MACHINE – must be the best full feature "Pub" Fruit Machine. Spin the symbols, use the "nudge" "hold" "gamble" facility – win or lose with true percentage payouts.
2. BLACK JACK – break the bank with a five card trick. This game follows the rules of Pontoon. The Spectrum croupier deals the cards with skill and is after your stake money!
Superb graphics.

Temptation Software Limited

NEW
The 3 fastest playable 100% machine code arcade games for the VIC 20 unexp

SPECTRUM 16K
CHALLENGE
by Neil Streeter
A Temptation games double.
1. MASTER CODE DELUXE – all the features of the well known game. 8 skill levels – any code or no repeated colours. Good clear graphics show the success or failure of your logic as the computer assesses each line.
2. HIGHER AND LOWER – skill, hunches and sixth sense are needed to beat this fast dealing machine. Graphically as realistic as a certain television series. Will you be able to get to the end of the row of five cards, guessing whether the next card will be HIGHER or LOWER?

SPECTRUM 16K
GODZILLA AND THE MARTIANS
by Neil Streeter
The Martians have invaded, destroying the molecular structure of earth's atmosphere to make it compatible with their own planet.
"The girl of your dreams" is trapped at the top of a building site but for the moment protected from the evil invaders by a friendly Dinosaur! Leap over deadly Martian invaders – scale ladders – jump the man traps – rescue her before the oxygen is totally absorbed.
Kong type game for SUPERHUMANS.

ARCADE
VIC 20 unexp
SWARM
by Andrew Haisley
As a pilot testing the latest star ship, breakdown in your guidance systems causes you to materialise in the breeding grounds of the Psigophorus, an unbelievably nasty insect life form which kills anything entering its space. Survival depends on destruction of the eggs before they hatch to form a SWARM. They can use your laser energy to mutate at an alarming rate and the only escape from the devastating attack of a Swarm is by destroying the Psigophorus in only one brief stage of its life cycle.
CAN YOU SURVIVE this high scoring game?

ARCADE
VIC 20 unexp
ALIEN VORTEX
by Andrew Haisley
It is the 23rd Century – unemployment 99.9% – due to 300% inflation, money replaced by credit discs – to relieve boredom the I.R.S.P. sets up huge gambling arcades – debts run high – inhabitants who cannot pay take part in "THE GAME". Transported to Launch Base 3 they are sealed into a Zelton Earth Defender and attacked by waves of mutant birds, specially bred on the Space Station Alien. Moneylenders bet on the length of the ill-fated player's survival, so recovering their losses. SET your body modulator to HYPERDRIVE. PRIME your firing fingers and HANG LOOSE.
High scoring game.

ARCADE
VIC 20 unexp
THUNDERFLASH
by Andrew Haisley
The year 2500 A.D. has produced a problem: space Rats are using humanoids for experimentation! Their technical skills include impenetrable defence systems. A Royal Space Fleet Pilot sent to destroy them has been killed. YOU ARE INVITED TO TAKE HIS PLACE.
You will be bombarded by zig-zagging steel arrows – if not destroyed they turn into Thunderflashes which explode when hit. Being unstable they release sparks which you must destroy before they hit you. Your survival angers the Rats who increase the speed and fury of the attack.
High scoring game.

VIC 20 16K
DRAGON 32K
MICROPOLY
by Richard Fry & Simon Lacey
Play this version of the family board game with a competent and challenging microbanker and property tycoon. State of game and board on instant recall – or the game saved.
Game for up to four players AND the computer.

VIC 20 Unexp
COBUS MAZ
by Dave Gibson
A series of ridiculously impossible layouts which our self-destructing Programmer has devised for VICtims! Just get from "A" to "B" without being blown up or eaten by a COBUS – simple? You are given five lives and five ZOGS to hyperspace a COBUS when you are cornered. Successful exit brings the reward of greater challenge with progressively difficult layouts and hidden complications. Keys require collecting in a correct order to open the door: devilish invisible mines and

TI 99/4A Ext. Basic
HOUSE OF BUGS
by Tony Frampton
The Bugs in this game will raise your blood pressure to the limits and drive spectators into a frenzy!
In this high scoring game killer bugs roam the top floors. Stay alive by clinging to the ceiling whilst they pass beneath, but you cannot seek refuge on that square again. BUNGE a Bug and gain 50 points, but he may return for his revenge – a vicious ritual followed by your paralysis and death! WATCH the Bugs go hopping mad when target scores give you the services of a Bugsterer.
Fantastic graphics and sound.

TI 99/4A Ext. Basic
TANK BATTLE
by Tony Frampton
Can you hold back a relentless army of tanks, sometimes in convoy but often slipping in under the cover of their barrage of gunfire as they try to penetrate your anti tank barriers? Manoeuvre your tank controlling its gun barrel for accurate range. WATCH your salvos disintegrate the enemy. BUT BEWARE the deadly return fire. Realistic graphics and sound. Five skill levels – strategy to desperation.

TI 99/4A Ext. Basic
SPECIAL MISSION
by Tony Frampton
TOP SECRET – save the world from destruction – HOW? WHY? WHEN?
Your mission starts in a large briefing room: there is a door to the East. You can see a blood stained envelope and a cold strong box, you are carrying nothing at all! TIME is running out, the robots have been activated – WHAT ARE YOU GOING TO DO?
Only a T.I. trained special adventure agent has a chance of saving millions from annihilation.

NEW
DRAGON 32K
SEARCHWORD
by Ian A. Macey
A WORD PUZZLER'S PARADISE!
CREATE your own word puzzles by the thousand.
An irresistible game for word puzzle enthusiasts, this program offers endless permutations. The computer will accept any list of words containing from 3 to 12 letters and conceal them within a letter grid until the player identifies them by giving the correct start position co-ordinates and direction. Program also includes two demonstration files and word save facility. Hours of enjoyment for one or more players.



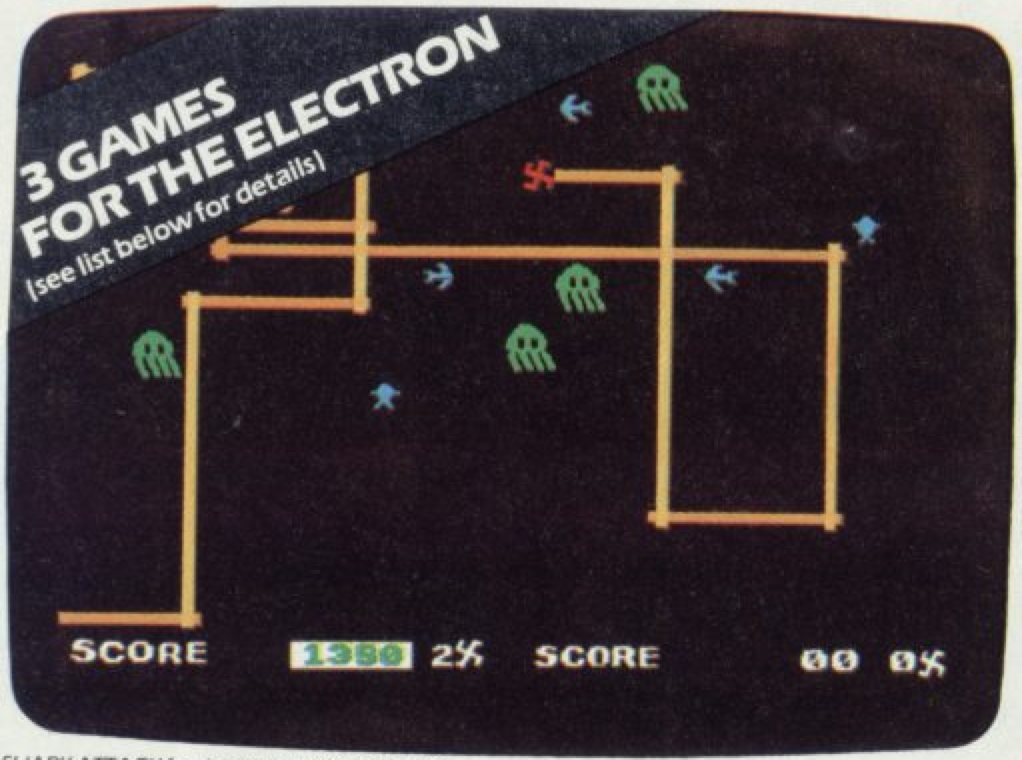
Name
Address

Postcode
Game
Computer
I enclose cheque. p.o. for £

To: Temptation Software Ltd.,
27 Cinque Ports St.,
Rye, E. Sussex.

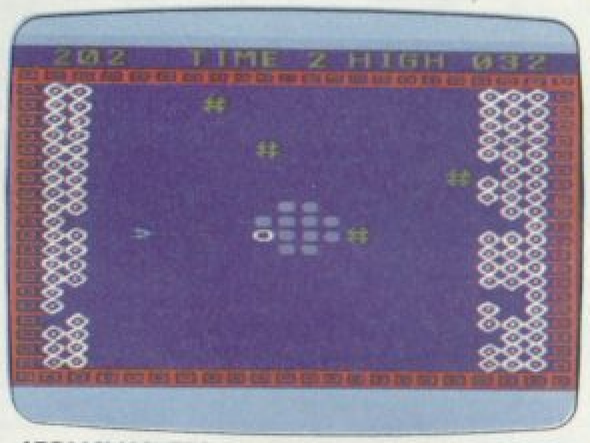
GAMES £5.95
1st Class postage and packing and our unique lifetime replacement guarantee
Overseas add £1.00 to each Game

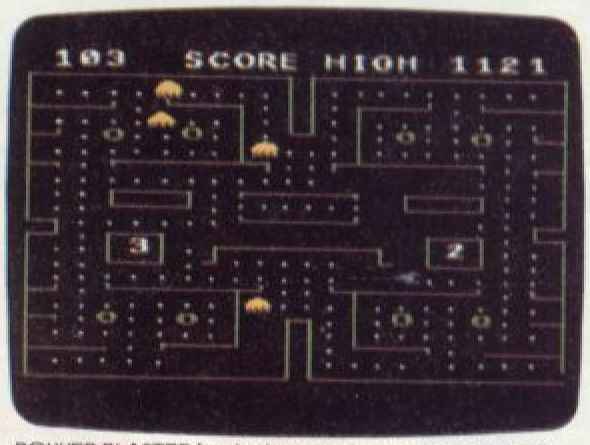
Dealer/Trade enquries
& New programmes welcomed
phone Dave Clements
(07974) 2225



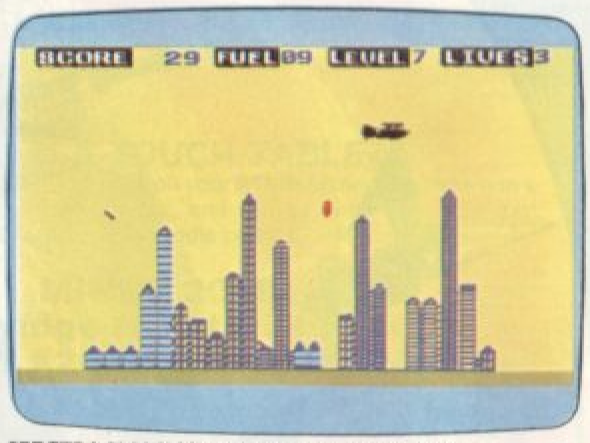
SHARK ATTACK for the 16K or 48K Spectrum


TIME DESTROYERS for the expanded Vic 20 (3K+)


ATOM SMASHER for the BBC and unexpanded Vic 20



POWER BLASTER for the Lynx and unexpanded Vic 20



SPECTRA SMASH for the 16K or 48K Spectrum

GAMES THAT ARE HARD TO BEAT

UNEXPANDED VIC 20

Sea Invasion		£4.99
Mind Twisters		£4.99
Alphoids	NEW	£5.99
Insector	NEW	£5.99
Power Blaster		£5.99
Shark Attack		£5.99
Space Escort	NEW	£5.99
Space Fortress		£5.99
Space Attack		£5.99
Quadrant	NEW	£6.99
Atom Smasher		£6.99
Pedes and Mutants	NEW	£6.99
Multisound Synthesiser		£6.99
Martian Raider		£6.99

EXPANDED VIC 20 (3K, 8K or 16K)

Caterpillar	NEW	£5.99
Time Destroyers		£6.99
Moons of Jupiter		£7.99

ADVENTURES FOR THE VIC 20

Zorgon's Kingdom (8K or 16K) (real time graphic adventure)	NEW	£6.99
Sword of Hrakel (3K, 8K or 16K) (classic adventure)	NEW	£5.99
Golden Apple of Zeus (8K or 16K)	NEW	£4.99
Animal Magic (16K+)	NEW	£5.99

COMMODORE 64

Zappy Zooks	NEW	£6.99
Dicky's Diamond	NEW	£6.99
Pottit	NEW	£6.99
Tombs of Xeiops	NEW	£6.99
Fools Gold	NEW	£6.99
Stellar Triumph	NEW	£6.99
Multisound Synthesiser	NEW	£14.99

FREE COMPETITIONS

Every action game purchased brings a free entry into the national competition to find the Supreme Champion, and free entry into the annual Romik Grand Master competition with its fantastic prizes.

FORTH for the 64 only £19.95

ELECTRON

Birds of Prey	NEW	£6.99
Atom Smasher	NEW	£6.99
Alien Break-in	NEW	£6.99

BBC

Alien Break-in (Model B only)	NEW	£6.99
Birds of Prey (Model A or B)		£6.99
Atom Smasher (Model A or B)		£6.99

16K or 48K SPECTRUM

Colour Clash		£7.99
Galactic Trooper		£5.99
3D Monster Chase		£6.99
Spectra Smash (plus Breakout)		£6.99
Shark Attack		£5.99
Sub	NEW	£5.99
Astroplaner (48K only)	NEW	£5.99

ZX 81

Super Nine – 9 1K games		£4.99
Galactic Trooper (16K)	NEW	£4.99
Galaxy Jail Break (16K)	NEW	£4.99
Bubble Bugs (16K)	NEW	£4.99
Bank Robber (16K)	NEW	£4.99

DRAGON

Strategic Command		£6.99
Convoy Attack	NEW	£6.99
Cyclops	NEW	£6.99
Romik Cube	NEW	£6.99
White Crystal (graphic adventure)	NEW	£6.99

ORIC

Loch Ness Monster	NEW	£6.99

ATARI 400 OR 800

See-Saw Scramble		£9.99

LYNX

Atom Smasher	NEW	£9.99
3D Monster Craze	NEW	£9.99
Floyd's Bank	NEW	£9.99
Power Blaster		£9.99

TOP PRICES PAID!

We're always on the lookout for new, top quality machine code arcade games for any machine. If you have what you consider a marketable game, let us know. Nobody pays higher royalties than we do.

ROMIK SOFTWARE

ROMIK

Romik Software, 272 Argyll Avenue, Slough SL1 4HE.

C & VG SOFTWARE FORM

Have you written a games program which you feel is just right for C&VG? If so we have come up with a form to ensure that we can test it out and give you our views on it, as quickly as possible.

We would prefer a tape and listing but can work from just a tape and will return it to you if it doesn't find its way into the magazine. We will also need an additional sheet explaining the game and its theme. And any documentation like lists of variables or how certain routines are working, would be of great help to beginners. Please make sure that your name, address and the program name is on everything you send us, including the cassette itself.

This form will merely help us to keep a check on your game as it goes through our testing process and make sure we have all the information we need to present it properly in the magazine.

If you don't want to cut up the magazine, we will accept photocopies or close copies of this page. This form will be appearing regularly in C&VG issues from now on.

Remember we pay £10 for each listing published and you could win our Programmer of the Year Contest where we will try to turn the winner into a best-selling games author.

Program name:

Machine make: Model

Other models it should run on: Number of K needed to run it:

Other equipment (joysticks, Extended Basic, add ons, etc.) needed to run it:

Author's Christian name: Surname:

Address:

Tel: Date:

Type of game: (If original please say so)

Loading instructions:

Game instructions: (If not included in the listing)

Office use only

Date received:

Acknowledgement sent: ☐

Name of evaluator:

Date sent out:

Date due back:

Needs to be returned to author for alterations: ☐ Date sent:

Due to be published in issue of magazine.

Evaluator's comments

Good enough to publish ☐

Needs some tidying up ☐

Not worth publishing ☐

Same game already published on this micro ☐

Wouldn't load ☐

CORRECTION

In a recent ColecoVision T.V. game advertisement reference was made to the maximum cartridge power of Mattel Intellivision.

Mattel Electronics have informed us that their Intellivision Module has a potential maximum game cartridge power of 64K.

Ideal Toy Co. Ltd., wishes to apologise for the inaccuracy and misleading impression which it may have caused.



N·E·X·T M·O·N·T·H N·E·X·T M·O·N·T·H N·E·X·T M·O·N·T·H N·E·X·T M·O·N·T·H N·E·X·T M·O·N·T·H

STAND BY FOR ADVENTURE

High Adventure will be coming to the pages of *Computer & Video Games* next issue when we proudly present the *C&VG* Book of Adventure. It will be packed with reviews, features and competitions — a must for experienced Adventurers and those of you thinking about taking a break from space shoot outs. The whole thing is being masterminded by *C&VG*'s Adventure supremo Keith Campbell, and he'll be writing about the history of Adventure, reviewing games, presenting a big helping of your letters, and answering your Adventure problems.

We've also managed to collar the man who has written some of the best Adventures of all time — Scott Adams. He'll be revealing a few secrets and talking about his now famous series of Adventures.

There will be features on writing Adventures, mapping to solve them and the play-by-mail games that keep the Post Office busy!

The Book of Adventure will also include a look at the recent video-game Adventure boom — plus much more. Can you afford to miss it? Demand is bound to be high for this issue of *C&VG* — so place your order now!

Meanwhile — within the pages of *Computer & Video Games* — the magazine, something is stirring. All the regular features will be there — plus the second in our new Program Extra series. In conjunction with our Book of Adventure we'll be starting off a special Adventure listing series for the Sharp MZ80k by Frank Rodney.

On the games front we've uncovered an original and very addictive game for the Spectrum called Demolition. Our reviewers say it's the best game they've seen for a long time with great graphics and an even better playability rating!

For Atari owners we'll be presenting a little number called Crash Landing — watch out for the flying wreckage! And, yes, Vic-20 owners, Turnip Turmoil will actually appear in our January issue. We just couldn't get them dug up in time for this issue!

Meanwhile, Texas owners will be watching the skies for Paratroopers, our offering for the TI, and those of you with a Sharp could suddenly become bird-watchers if you like our listing for your machine, called Eagle. These creatures definitely don't have bird-brains!

Moving on to the Dragon there will be a nifty little listing for this particular micro called Road Runner. Beep! beep! We also hope to add the ZX81, Atom — and, of course, the BBC B to our list for next issue. Phew!

Moving on to competitions — yes, we'll find room for them too — we hope to be able to put up those three Coleco ADAM family computer systems on offer. Unfortunately they just couldn't make it across the Atlantic in time for this issue.

Plus whatever we dream up in time to go into the issue — so don't forget to rush out to your newsagents on December 16th and grab a copy of *C&VG* with free Book of Adventure. You know it makes sense!

OUR SCRABBLE WINNERS . . .

There was a tremendous response to the Scrabble competition announced in *C&VG*'s October issue and we have now chosen the six finalists who scored the highest number of points. They will all go forward to a grand final, the venue to be announced later, where they will battle it out over the Scrabble board. The winner will receive a 48k Spectrum and scrabble tape from Psion as first prize with the five runners up receiving a De-Luxe Scrabble Set from Spears.

The six finalists were: Andrew Scott, Peterborough with 341 points; P. Lewis, Sheffield with 341 points; Miss R. Chapman, Sheffield with 341 points; I. MacNiell, Fort William with 341 points; Peter Foord, Avon with 339 points and Mrs Margo McDonagh, Ireland with 338 points.

Our scrabbling expert commented that some people got higher scores but were eliminated as they didn't play according to the rules. They used the letters of one hand to make several different words in the same go.

MICRONET CONTEST

Can you write great computer games? Do you want to win a Micronet modem and a year's subscription to the Micronet system — a window on a whole new world? Well, you've got to enter our great new programming competition which starts next issue. All you have to do is design a game on your micro, send it in to us, then sit back and wait for the Micronet judges to do their bit. There will be lots of goodies on offer for the runners up too — like software, and *Computer and Video Games* t-shirts! So get programming and watch out for full details in our next action packed issue!

To my newsagent: Please deliver/reserve me a copy of Computer and Video Games every month. Price 85p.

Name ....

Address ....

....

....

....

....

BLABY COMPUTER GAMES PRESENT

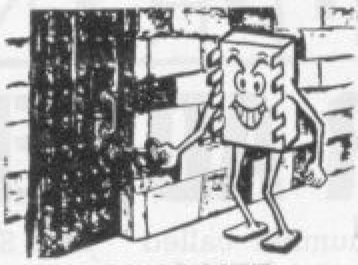


"GOTCHA"

"GOTCHA" — After escaping from the local nick, Ernie is soon back up to his old tricks. **48k M/C £5.50**

DODO — Starring Dodo and the Snow Bees — you are the last surviving breed of Dodo's alone in the Antarctic, surrounded by ice blocks and Snow Bees. Slide the ice blocks on to the Snow Bees or electrify the walls to kill them. **48k M/C £5.50**

CONFUSION — You are totally confused and are being attacked from both sides by the most nastiest Aliens known in the universe. **48k M/C £4.95**



PLUGGITT

PLUGGITT — Young Percy Pluggitt must get back to this circuit board in time. Please help him find the right keys! **48k M/C £5.50**

HIGH RISE HARRY — Featuring Harry High Rise and the Rust Bugs — guide Harry the Painter along the girders, up the ladders, on to the lifts, but mind the slides! Five whacky screens. **48k M/C £5.50**

SHUTTLE — Guide your Shuttlecraft down to the surface of the Planet Nexon, rescue the stranded space patrol and return them one by one to the safety of the Mothership. **48k M/C £4.95**



KILLER KONG

KILLER KONG — Featuring five screens of arcade action — Elevators — Kong — Mario — Barrels — Hamburgers and even Mario's girl. **48k M/C £5.50**

CHOPPER RESCUE — Scientists are being entombed under radioactive waste, can you as a helicopter pilot, rescue them all in time? **48k M/C £5.50**

KOSMIC PIRATE — Guide your Pirate vessel through the massive fleet of space craft, that has encircled the planet Verox and try to steal your essential needs. **48k M/C £4.95**



BARMY BURGERS

BARMY BURGERS — Baps, Burgers, Cheese and Lettuce — they are all there all you have to do is put them together, it sounds easy doesn't it? But not when you are being chased by a fried egg and sausages! **48k M/C £5.50**

GOLD DIGGER — Dig your way through the Mine and find the gold nuggets, but keep away from the nugget gnashers. **48k M/C £4.95**

YOUR GAME COULD BE IN THIS SPACE. PROGRAMS WANTED.

ALL GAMES ARE AVAILABLE ON MICRO DRIVE £10.95

DISTRIBUTORS

LONDON	MIDLANDS	SOUTH WEST	YORKSHIRE	SCOTLAND	ICELAND	DENMARK	HOLLAND	SPAIN
LIGHTNING RECORDS 01-969 5255	CENTRE SOFT 021-520 7591	PCS S.W. EXETER	PILON MIST OSSETT	JARAK SALES HAMILTON	BOKABUD REJKJAVIK 24242	ZX DATA HVIDOVRE 010-451474899	AASHIMA TRADING ROTTERDAM 010 31 10 149315	VENTAMATIC GERONA 972 25 56 16

RETAIL OUTLETS

W. H. SMITHS — SELECTED BRANCHES
ARCADE COMPUTERS — LEICESTER
CRASH MICRO — LUDLOW
T. H. PECK — EDINBURGH
ABERGELE COMPUTERS — ABERGELE

GORDON HAYWOOD — ALFRETON
IVY SOFT — PLYMOUTH
FOX'S — NOTTINGHAM

AND MANY MORE GOOD COMPUTER STORES

JOYSTICK INTERFACE £11.95

SPECSOUND £9.50 (fits inside your Spectrum)

ATARI RAMPACKS 32k £49.95

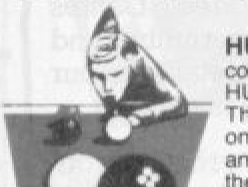
CROSSWAYS HOUSE, LUTTERWORTH RD., BLABY, LEICESTER.
TELEPHONE 0533 773641 TELEX 342629 JRHHG

DEALERS — PLEASE ASK FOR OUR VIDEO TAPE OF OUR COMPLETE RANGE OF GAMES

NEW SUPERGAMES
from bubble bus software



Commodore 64



HUSTLER Written in machine code and using Sprite graphics HUSTLER takes the 64 to its limits. There are six 'pool' type games for one or two players, high scores kept and super music. See the great press reviews. **£5.99**

EXTERMINATOR Definitely one of the best arcade action games around for the 64. Shoot the worm and everything else in the garden whilst avoiding the deadly spider and swooping eagle. Machine code using high resolution and Sprite graphics with excellent sound. Beware, it's very addictive. **£5.99**



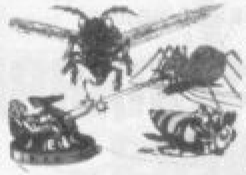
QUIZZER Set up your own educational quizzes with password protection. Ideal for home and school. **£5.99**

LABEL PRINTER Stores names and addresses on tape which you can recall and amend. Label size you can print is from 1 to 19 lines. **£5.99**

POSTER PRINTER Ever wanted to produce your own special leaflets. This program prints a special enlarged character set. **£5.99**

ADVERTISER Amazingly turns your 64 into a musical moving message display machine. Ideal for shops, clubs, etc. **£5.99**

unexpanded VIC 20



EXTERMINATOR Fast action arcade game in which your task is to destroy the worm who is out to get you. Watch out for the eagle which will pounce on you just when you think you're safe. High resolution machine code. **£5.99**



THE CATCH This game will have you coming back for more. You must catch the falling bombs before they destroy the cities. The catch is, they're moving from side to side and faster and faster. High resolution machine code. **£5.99**



ANTIMATTER SPLATTER There is an ugly alien dropping bombs on the population. Your job is to 'zap' those bombs before they land. It's not easy though as they are falling through moving belts. Super high resolution machine code game. **£5.99**

*We have **13 other VIC 20 games**, plus educational and business programs. Send stamped, addressed envelope for lists.*

Bubble Bus products are available from: LIGHTNING DEALERS — SPECTRUM SHOPS — GREENS — SELECTED HMV SHOPS — GAMES WORKSHOPS — CENTRESOFT STOCKISTS — SOFTSEL STOCKISTS — P.C.S. STOCKISTS.

If you have any trouble buying our products you may buy them direct, please add 50p post and packing.

bubble bus
87 High Street, Tonbridge, Kent TN9 1RX

CVG 12/83



By the flick of a switch you could unleash the power of Genon in your own living room! But by thoughtful strategic play you could overcome Genon.

The only way this can be done is by destroying the powerful computer that controls all things.

After being transported to the Corridors of Genon you'll need your wits about you to master the door codes and venture through the corridors to locate the computer. While this is going on the computer will know your exact whereabouts and try to force you into a mistake by closing doors around you.

The computer also controls Bogul – the guardian of the corridors who can reduce your thought power (ESP) every time it finds and bogulises you, so you'd better listen out for its approaching footsteps!

Should you locate the computer and should your ESP be sufficient you'll have to pull on all your energy to try and master the 3 digit self destruct code.

With this done, now is the time to escape from the corridors. No door codes to worry about this time. But its no easy task as Bogul will have cloned – how many times though? Well that depends on how long you took to crack the self destruct code. There could be as many as eight! And you'd better be careful as only one Bogulisation and you've had it!

Full colour graphics, sound effects and, of course, 3D machine code action as you would expect from Malcolm Evans 'the 3D expert'*, to push your 48K Spectrum to its limits. 'Corridors of Genon' is supplied with a keyboard overlay and is also compatible with the Kempston joystick.

If you survive this you could try . . .

New Generation Software

Products available from W H Smith, Boots, Menzies, Spectrum Group, HMV, and all leading department & computer stores

FREEPOST Bath BA2 4TD Tel. 0225-316924
Mail order by return.

GSH

* *Computer & Video Games*

First

Check our prices. Then Count the Coupons!

ACCUMULATOR DISCOUNT COUPONS

A Chromasonic special.

On every £5 worth of Software* you buy from us, over the counter or by mail, we'll give you a 50p **ADC**. So, with a £20 purchase, you get four **ADC's** and so on.



4 SPECIAL OFFER PACKAGES

1. commodore 64 + cassette deck + dust covers (p&p code)
If purchased separately these items would cost £278.85 OUR PRICE **£229.00** d
Buy now for 2 yrs guarantee.

2. commodore 64 + cassette deck + Introduction to Basics Part I (Manual and 2 cassettes to take you through the first steps in computing) + DFM Data Base (Information Storage Programme) + 2 dust covers.
If purchased separately these items would cost £313.00 OUR PRICE **£257.00** d

3. commodore 64 + VIC 1541 disk drive + Box of 10 diskettes + 2 dust covers.
If purchased separately these items would cost £490.00 OUR PRICE **£429.00** d

4. Businessman's Starter System.
Comprises Commodore 64 + VIC 1541 disk drive + Box of 10 diskettes + VIC 1525 Printer + Box of paper + 3 dust covers.
If purchased separately these would cost £735.00 OUR PRICE **£649.00** d

Item	Price	p&p code
NEW 64 Printer VIC 1526 with cable	£310.00	d
NEW Printer/Plotter (4-colour)	£152.99	d
NEW LOW-PRICE - Disk Drive VIC 1541 with cable	£210.00	d
Printer VIC 1525 with cable	£212.75	d
Book: 'Programmer's Reference Guide'	£ 9.95	b
Easy Script (Word processing package)	£ 75.00	b
DFM Data Base - Disk or Cassette (state which required)	£ 19.50	b
DFM Mail labels (Print labels to your specification)	£ 9.50	b
Catalogue (Dedicated filing system)	£ 16.50	b
Datalog (User orientated filing system)	£ 17.50	b
Journal (A financial diary with permanent display)	£ 19.50	b
Gortek & Microchips (Designed to teach 10/13 year olds basics)	£ 12.95	b
	£ 75.00	b
Sales Ledger	£ 75.00	b
Purchase Ledger	£ 75.00	b
Easy Stock		
Attack of the Mutant Camels (Try and beat hostile Aliens)	£ 8.50	a
Motor Mania (A thrilling cross country car race)	£ 8.95	a
Dust cover for 64/VIC 1525	£ 2.95	a
Joystick	£ 6.90	b
Introduction to Basics Part I (see above)	£ 14.95	b

Many other titles in stock. Free list with first delivery. Or send S.A.E. for full list.

BBC 'Special Offers'

Model 'B' with FREE dust cover £399.00 d

Cumana Teac Drives with power supply & including Disc Formatter, manual & cables.

Item	Price	p&p code
100K Drive 40 Track	£225.00	d
200K Drive 80 Track	£257.00	d
800K Dual Drive 80 Track	£632.50	d
Torch Z80 Disk Pack. 800K plus Z80 Processor running Torch's own CP/M	£839.50	d
Disk Interface (including fitting charge)	£ 95.00	d
"View" ROM Word Processor	£ 59.80	a
Printer Driver	£ 9.95	a
Graphs & Charts on cassette	£ 9.95	a
MONITORS		
MICROVITEC 1431 "14" Colour Monitor	£264.50	d
SANYO HI-RES Green Screen Monitor	£114.00	d

Our Guarantee (2 years on 64's)
1 full year for labour and parts on all Hardware.



SPECIAL OFFER PACKAGE commodore VIC 20

+ C2N cassette recorder + Introduction to Basics Part 1 (Manual and 2 cassettes to take you through the first steps in computing) + 1 cassette with four games + Only from Chromasonic. FREE DUST COVER normally sold for £2.95. If purchased separately these items would cost £249.99 OUR PRICE **£134.99** d

Item	Price	p&p code
VIC 1525 Printer with cable	£212.75	d
VIC 1541 Disk Drive with cable	£210.00	d
16K RAM pack	£ 28.95	b
24K RAM pack	£ 47.95	b
Joystick	£ 6.90	a
4-slot motherboard	£ 33.35	c
Dust cover for VIC 20/VIC 1525	£ 2.95	a
NEW Printer/Plotter (4-colour)	£152.99	d
Super Expander (High resolution cartridge with 3K RAM)	£ 31.00	b
Programmers Aid cartridge (Adds more than 20 commands)	£ 28.00	b
C2N cassette unit with cable	£ 39.10	c
Sargon Chess (6 levels of play)	£ 23.00	b
Choplifter (Rescue your men and then return to base)	£ 24.95	b
VIC Programmer's Reference Guide	£ 12.50	b
Introduction to Basics Part I	£ 13.50	b

Send SAE for **FREE hardware/software booklet.**



DRAGON 32

Free Basic Training Manual supplied

* 9 colours * 32K RAM memory as standard, expandable to 64K * Extended Microsoft colour basic as standard * Advanced Typewriter Keyboard * 6809E CPU * 32 columns x 6 lines * sound feature

£157.50 d

Item	Price	p&p code
Printer & Cable Seikosha GP100A and necessary cable	£232.30	d
Pair of Joysticks	£ 14.95	b
Dust cover for Dragon 32/GP100A	£ 2.95	a
Single Disk Drive with controller	£275.00	d
Single Disc Drive without controller	£225.00	d
Additional Single Drive	£200.00	d
The King (Save the damsel in distress from the gorilla)	£ 7.95	a
Katerpillar Attack (Stop the katerpillar reaching the bottom)	£ 7.95	a
Talking Android Attack (This game speaks for itself)	£ 7.95	a
Telewriter (Word processor that gives 51 cols. x 24 lines)	£ 49.95	b
DFM (A powerful easy to use database)	£ 19.50	a
Racer Ball (Defend your moon base from enemy lasers)	£ 7.95	a
Scarfman (Run around a maze eating blocks as nasties chase you)	£ 7.95	a

Many other titles in stock. Free list with first delivery. Or send S.A.E. for full list.

Official DRAGON sales and service agents for the whole Greater London Area.

Prices correct at time of going to press.

CHROMASONIC PERSONAL COMPUTERS

48 Junction Road, Archway, London N19 5RD

TEL: 01-263 9493 or 5

- FREE ADVICE on all aspects of Personal Computers. You only have to ask.
- DELIVERY. On P.O.'s, Access or Barclaycard, dispatch usually within 24 hrs. Or we'll advise by return. On cheques allow about 5 days.

If not completely satisfied, return the goods to us undamaged within 14 days for a full refund including p&p. VAT included in all prices.

CHROMASONIC PERSONAL COMPUTERS

Send to: Chromasonic Personal Computers, 48 Junction Road, Archway, London N19 5RD.

Please send me the following items. All prices include VAT

£ ....
£ ....
£ ....
£ ....

p&p code d = £8.00, c = £3.50, b = £2 and a = 60p (if more than one item ordered, add only one p&p amount – the highest) → p&p £

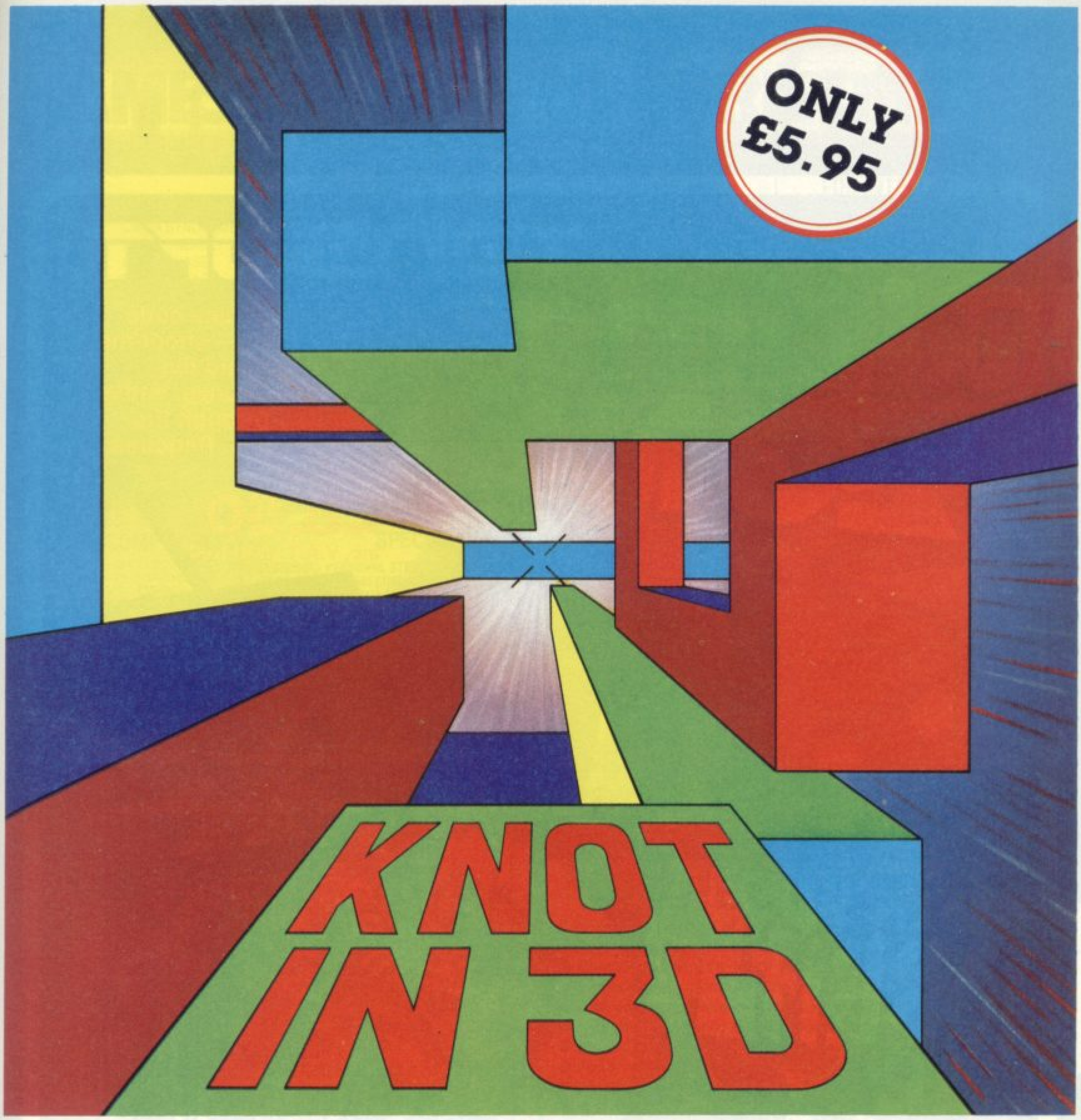
Total £

I enclose my Cheque/P.O. for £ ....

Please debit my Access/Barclaycard no ....

Name: ....

Address: ....



Known by some as 'getting knotted'. You won't find a game for the 48K Spectrum quite like this anywhere else!

Imagine yourself in a capsule hurtling through a void while leaving a trail behind you. The only manoeuvres possible are up, down, forward, left and right. How long can you survive without crashing into your own trail? As the trails build up so your reactions will need to sharpen up. To make the game that little bit more interesting we've added the complication of up to four rogue chasers that attempt to block your path. The challenge is not only to avoid the chasers and score points but to try and work out a playing strategy – you won't find this easy!

Naturally you'll be terminated when you out manoeuvre yourself and get caught in 'the knot'!

Don't just take our word for it –

'A highly original, professional and exciting game and one that I could play all night – very highly recommended' – ZX Computing.

'Knot in 3D must be one of the most beautiful, graphically, games to be seen on the Spectrum' – Popular Computing Weekly.

'Even 3D maze games can get repetitive but Knot in 3D contrives to be an interesting and innovative game by standing the 3D maze concept on its head'.
– Personal Computer News.

'Most 3D games have either a graphic display or an addictive playable game – but not both, this is one of the few that combine these qualities'. – Computer & Video Games. But that's not all . . .

New Generation Software

Products available from W H Smith, Boots, Menzies, Spectrum Group, HMV, and all leading department & computer stores

FREEPOST Bath BA2 4TD Tel. 0225-316924
Mail order by return.

Compatible with the Kempston Joystick



ORIC Software
TANSOFT
ultima ZONE
A 100% machine code space trilogy—shoot the Walkons, avoid the bouncing Brunes, battle your way through the satellite zone. Requires 48k Oric.
£8.50
inc. V.A.T. post free
The HOBBIT
In co-operation with Melbourne House.
At last, this best selling adventure is available for the Oric based on J. R. R. Tolkien's book 'The Hobbit' (included) a complete text and graphics adventure. Requires 48k Oric.
£14.95 inc. V.A.T. post free.
Our software is available from all Oric dealers and most good software suppliers. In case of difficulty please contact us on Teversham (02205) 2261 or write to us at:
TANSOFT
Unit 1 & 2, Techno Park, Newmarket Road, Cambridge

GAMES BY POST FOR CHRISTMAS!

GEMINI ELECTRONICS HAS THE MOST AMAZING RANGE OF GAMES FOR THE ATARI VCS, INTELLIVISION AND COMMODORE VIC-20 AT THE MOST AMAZINGLY LOW PRICES! CHECK BELOW AND ORDER YOUR GIFT TODAY:

FOR THE ATARI VCS
ALL AT £10 EACH:

COSMIC ARK. CHINA SYNDROME. KABOOM. VIDEO DRAUGHTS. DRAGSTER.
STAR VOYAGER. LOST LUGGAGE. HUNT AND SCORE. YAR'S REVENGE. STARMASTER.
FIREFIGHTER. SPACE CHASE. BERSERK. VOLLEYBALL. CARNIVAL.
DEMON ATTACK. SHARK ATTACK. DEFENDER. HAUNTED HOUSE. GORF.
ATLANTIS. RACQUETBALL. MATHS GRAN PRIX. NIGHT DRIVER. WIZARD OF WOR.
BOXING. PADDLES (PR). WARLORDS. MINIATURE GOLF. FREEWAY.
STAR WARS. ACTION FORCE. DEMONS TO DIAMONDS. BRIDGE. E.T.
SPIDERMAN. DEMON ATTACK. SPACE WAR. ICE HOCKEY.

ALL AT £15 EACH:
SEAQUEST.
SPIDER FIGHTER.
STAR RAIDERS.
IMAGIC VCS.
STORAGE BOX.
PACMAN.
ASTEROIDS.

EX-DEMO ATARI VCS: £25 EACH!

FOR INTELLIVISION
ALL AT £13 EACH:
ATLANTIS.
MICROSURGEON.
BEAUTY AND THE BEAST.
MATHS FUN.
STAMPEDE.
BOWLING.
POKER/BLACKJACK.
WORD FUN.
MATH FUN.
FROGGER.

FOR THE VECTREX
ALL AT £15 EACH:
STARHAWK. BERSERK.
SOLAR QUEST. SCRAMBLE.
SPACE WARS. CLEAN SWEEP.

PLUS EX-DEMO VECTREX UNITS: £90 EACH!

FOR THE ROWTRON TELENG TV GAME
ALL AT £8 EACH:
HORSE RACING. REVERSI.
FACE THE MUSIC. MATH TWO.
FOUR IN A ROW. FLAG CAPTURE.

EX—DEMO TELENG TV GAMES: £25 EACH:

FOR THE STARPATH SUPERCHARGER
ALL AT £8 EACH:
FIREBALL. COMMUNIST
SUICIDE MUTANTS
MISSION. FROM SPACE.

EX-DEMO SUPERCHARGERS: £20 EACH!

FOR THE VIC-20
CARTRIDGES AT ONLY £9 EACH:
MOLE ATTACK. ROAD RACE.
STAR BATTLE.
SUPER LANDER.
SUPER SLOT MACHINE.
ALIEN. ASTROBLITZ.
RENAISSANCE.
SATELLITES & METEORITES.
METEOR RUN.
CLOUDBURST.
RIVER RESCUE.
VIC MUSIC COMPOSER.
PROGRAMMERS AID CARTRIDGE.
MACHINE CODE MONITOR CARTRIDGE.

PLUS: 3K RAM CARTRIDGE: **£15**
8K RAM CARTRIDGE: **£19**
CURRAH CHATTERBOX VOICE SYNTHESIZER: **£25!**
PLUS COMMODORE 64
PROGRAMMERS REFERENCE GUIDE: **ONLY £8!**
PLUS VIC REVEALED BOOK: **£5**
PLUS MANY VIC-20 TAPES FROM £4 EACH-SEND NOW FOR LISTS!
PLUS EX-DEMO COMMODORE VIC-20 COMPUTERS AT ONLY £49 EACH!

CHESS COMPUTERS
SENSORY 6 CHESS COMPUTERS: **£65**
MINI SENSORY CHESS COMPUTERS: **£25**
CARTRIDGES FOR MINI: **£15** EACH
MORPHY ENCORE CHESS COMPUTERS
NOW ONLY £65 EACH!

SPECIAL OFFER:
INGERSOLL PERSONAL STEREO RADIOS WITH HEADPHONES: £8 EACH!
ARCADE-MAN ATARI COMPATIBLE JOYSTICKS: £9 EACH!
TELEPHONE NOW FOR OUR ATARI 400/600/800 SOFTWARE SALES LIST-MANY UNREPEATABLE BARGAINS FROM £4.95 EACH!

FOR POST AND PACKING ADD 50p PER CARTRIDGE ORDERED. ADD £1.50 FOR P&P ON CHESS COMPUTERS.

GEMINI ELECTRONICS

GAMES BY POST, BOX 43, MANCHESTER M60 3AD
TEL: 061-835 1356 **ACCESS/VISA CARD HOLDERS-PHONE YOUR ORDER TODAY!**

ORDER NOW BY CHEQUE, ACCESS OR VISA:
PRE-XMAS DELIVERY GUARANTEED!

FOR ANY SINCLAIR **SPECTRUM**

TWO EXCITING NEW GAMES FROM

FASHIONsoFT

THE HOUSE OF GRAPHIC DESIGN



MENACE WHY collect the SAME GAME every time WITH just the title change. AN ORIGINAL, fast action, machine code ARCADE GAME, no invaders (well NASHER maybe)
YOU **ARE MENACE!!!** YOUR OBJECTIVE TO HARASS AND OFFEND
MENACE AUTHORITY FOR ONLY £4.95 inc P&P.



ARMAGEDDON the last defence. When space fortress Armageddon was built few people felt it would ever be needed. But . . . the pods are coming . . . your fighter is launched . . . a small COSMIC GUSHER is formed between you and the earth and DEMON bombers invade our space . . . your lasers spitting white hot death AND still the pods advance . . . and always the BEAST . . . dominant . . . wavering ominously above the . . . the moon is destroyed . . . our lunar companion vanquished . . . the debris glowing blood red . . . Mother Earth next. . . . and . . . **ARMAGEDDON** the last defence

MEAN, FAST, MACHINE CODE ACTION FOR ONLY £4.95 inc. P&P
"Best graphics I've seen outside Ultimate". (Popular Computing Weekly).

BOTH GAMES KEMPSTON JOYSTICK COMPATIBLE (OR KEYBOARD)
Send Cheque/PO payable to:

FASHIONSOFT, 13 NYMPSFIELD RD, GLOUCESTER

24 hour ANSAPHONE service (0242) 674960
but please hurry (ARMAGEDDON may begin in 1984)

SOFTWARE LIBRARY
FOR
SPECTRUM

Low cost weekly hire of the best arcade games, adventures, utilities, languages and business programs.

- Membership only £6.00 for 12 months.
- Program hiring from only 80p (plus 25p p&p).
- Free fully descriptive catalogue for members.
- New titles constantly being added.
- Purchase new programs at discount prices.
- Return of post service.
- All tapes despatched using first class post.
- We have full permission and licences from the leading software publishers, to whom royalties are paid.

Compare these features with our competitors and you will see why more Spectrum owners are joining the Kernow Software Library. Join today by clipping the coupon below or send a S.A.E. for further details.

☐ YES, please send me my free catalogue and selection sheet. I enclose my £6 cheque/Postal Order.

NAME . . . .

ADDRESS . . . .

. . . .

. . . . TEL . . . .

Send to:

KERNOW SOFTWARE LIBRARY
(Dept. CVG)
55 ELIOT DRIVE, ST GERMANS
SALTASH, CORNWALL PL12 5NL



MAL FUNCTION
T. HITCH
SNAG JNR
SCREAMING FOUL UP
THE BUGS
R.A.M.
.. AND I HOPE, YOU HAVE LEARNT YOUR LESSON. THE UNFORTUNATE INCIDENT ...
THE BUGS ARE STILL RECOVERING FROM THE BASHING OUR PROGRAMMER GAVE THEM IN THE LAST ISSUE ...!!
MAYBE WE DID GO A BIT TOO FAR!
... COULD HAVE BEEN AVOIDED IF YOU HAD NOT DESTRUCTIVELY INTERFERED WITH THAT CHESS PROGRAM. BLAH! BLAH! NAG! BLAH! BLAH! BLAH!
.. I SUGGEST WE DON'T MESS UP HIS NEXT PROGRAM!
WOW!
I'VE JUST GOT THE MOST ADVANCED COMPUTER, MUSIC MAKING CASSETTE AS A PRESSY!
.. I AGREE BUT, ONLY UNTIL CHRISTMAS IS OVER. AFTER ALL, THERE'S NO FUN LIVING IN THIS COMPUTER IF WE HAVE TO BEHAVE IN IT!
OK!
OUR PROGRAMMER GETS TO WORK!
PLINKY PLONK!
FANTASTIC! A FEW MORE HOURS AND I'LL HAVE CREATED MY GLORIOUS SYMPHONY IN 48K ...!!
HOURS PASS..
PLONKETTY PLINK!
.. I'LL BE HAILED AS ANOTHER BYTEHOVEN. HEH! HEH!
THE BUGS ARE NOT IMPRESSED!
PLONK! PLUNK!
GROAN! IT'S TERRIBLE, SOMEONE STOP HIM!
YERK!
SEEING AS IT'S CHRISTMAS LET'S HELP HIM OUT WITH THIS PROGRAM!
HMMM! OK THEN, JUST A LITTLE IMPROVEMENT!
AT LAST!
WAGGLE!
STAND BY FOR SQUEALS OF DELIGHT FELLOW BUGS!
.. WITH THIS LITTLE DIGIT, I SHALL LAUNCH A MILESTONE IN MUSICAL DEVELOPMENT UPON THE WORLD!
JINGLE BELLS! JINGLE BELLS!
SNARL!
CHRISTMAS OR NOT, THIS CALLS FOR A GRADE 'A' BUG BASHING!
THERE'S NO PLEASING SOME PEOPLE!



Take a giant step closer to reality with New Generation Software. The 3D Graphics of New Generation programs bring the screen alive and makes other games look as flat as snakes and ladders.

Spectrum owners will find that seeing is believing when they open the door on 'THE CORRIDORS OF GENON', the latest creation from New Generation. You will be saving the Universe from the evil that now controls all things. But beware – the sound of footsteps approaching could be Bogul!

Hurtle into a void leaving a trail for your unseen pursuers in 'KNOT IN 3D'. Weave your way through up to five trails but be careful, you could get knotted! Or travel through the depths of a moving tunnel full of bats, rats, spiders and toads in '3D TUNNEL', with a special surprise in the 48K version.

Stamina is the vital ingredient of 'ESCAPE', as you'll be venturing into the maze pursued by walking and flying dinosaurs.

ZX81 owners must be prepared for the shock of coming face to face with the T. Rex that leaps out from '3D MONSTER MAZE'. '3D DEFENDER' takes you out of this world and plunges you into space in a fast moving game to defend your home planet against alien spacecraft in a blitz of explosions, plasma blasts and photon beams.

All these exciting 3D games have been designed by Malcolm Evans, the 3D expert. They'll have you leaping out of your seat because you don't just play New Generation games, you live them.

Corridors of Genon for 48K Spectrum £5.95

Knot in 3D for 48K Spectrum £5.95
'Addictive, playable game'. Computer & Video Games.

3D Tunnel for 16K/48K Spectrum £5.95
'A masterpiece of programming' Computer and Video Games

Escape for 16K Spectrum £4.95
'One of the best and most original games we have seen for the Spectrum' Sinclair User

3D Monster Maze for 16K ZX81 £4.95
'Brilliant, Brilliant, Brilliant . . .' Popular Computing Weekly

3D Defender for 16K ZX81 £4.95
'Another 3D Winner' Sinclair User

New Generation Software

Products available from W H Smith, Boots, Menzies, Spectrum Group, HMV, and all leading department & computer stores

FREEPOST Bath BA2 4TD Tel 0225-316924
Mail order by return

PLAY IT AGAIN...
WITH AN ACE IN YOUR HAND

- 100% BRITISH MADE
- 1½ METRE CABLE
- HIGH IMPACT PLASTIC CASE
- PLASTIC STICK WITH STEEL SHAFT



PRO ACE®
COMPETITION JOYSTICK

NO MATTER WHAT THE GAME..... NOTHING PLAYS LIKE THE PRO-ACE

COMMODORE VIC 20/64 AND ATARI COMPATIBLE PLUS NUMEROUS VIDEO GAMES MACHINES

PLUS LEFT OR RIGHT HAND FIRE BUTTON

PLUS CENTRE FIRE BUTTON

PLUS PURPOSE DESIGNED SWITCHES

PLUS NON-SLIP NON-SCRATCH BASE

A totally BRITISH designed and manufactured Joystick with a 2 year warranty!

Spectrum and BBC Interfaces available.

Available from good computer dealers or direct from Sumlock Microware.

Please supply ☐ **PRO-ACE** at £12.95 each.

I enclose cheque/P.O. for £ ☐ CVG1

Name ____________________

Address ____________________

____________________ Tel ________

Price includes P + P U.K. only. Telephone: 061-834 4233

Manufactured and Distributed by

SUMLOCK MICROWARE
198 Deansgate, Manchester M3 3NE
Tel: 061-834 4233
Trade enquiries welcome.

CHART TOPPERS

	SPECTRUM	ZX 81		VIC-20	ATARI 400/800	
1	JET PAC (Ultimate)	FLIGHT SIMULATION (Sinclair)	1	ARCADIA (Imagine)	DONKEY KONG (Atari)	1
2	ZZOOM (Imagine)	3D GRAND PRIX (DK'Tronics)	2	OMEGA RACE (Commodore)	DIG-DUG (Atari)	2
3	FLIGHT SIMULATION (Psion)	SPACE RAIDERS (Sinclair)	3	GORF (Commodore)	COMPUTER WAR GAMES (Thorn-EMI)	3
4	MANIC MINER (Bug Byte)	DAMPER & GLOOPER (Quicksilva)	4	SKYHAWK (Commodore)	QIX (Atari)	4
5	HORACE & THE SPIDERS (Melbourne House/Psion)	GALAXIANS (Atari)	5	WACKY WAITERS (Imagine)	CENTIPEDE (Atari)	5
6	TRANZ AM (Imagine)	CHESS (Psion)	6	KRAZY KONG (Interceptor)	GALAXIANS (Atari)	6
7	ZIP-ZAP (Imagine)	CRAZY KONG (PSS)	7	PANIC (Bug Byte)	BLUE MAX (Synapse)	7
8	KONG (Ocean)	FOOTBALL MANAGER (Addictive Games)	8	PARATROOPERS (Rabbit)	FORT APOCALYPSE (Synapse)	8
9	ANT ATTACK (Quicksilva)	FANTASY GAMES (Sinclair)	9	COSMIC CRUNCHER (Commodore)	CHOPLIFTER (Broderbund)	9
10	VALHALLA (Microl)	SCRAMBLE (Quicksilva)	10	BEWITCHED (Imagine)	PACMAN (Atari)	10

We have *C&VG* "The Champ" t-shirts to give away to the highest score of the month on each game. Your score doesn't have to be higher than the scores published in the Hall of Fame — simply the highest score we receive for that month.

All you have to do is give it your best shot, get a witness to sign the form you'll find at the bottom of this page and send the coupon off to us without delay.

PLANETOIDS

1. Paul Dhonan, Reigate, Surrey — 696,200.
2. Matthew Constable, Andover, Kent — 682,800
3. Calvin Lawrence, Peterborough, Cambs — 582,225
4. Scott McDonald, Edinburgh, Scotland — 516,000
5. Jonathan Carrol, London WC2 — 512,325

MANIC MINER

1. Chris Moore, Patchway, Bristol — 1,116,319
2. Martin Leach, Orpington, Kent — 1,006,350
3. Grant Harrison, Sidcup, Kent — 716,225
4. Alan Simpson, Glasgow, Scotland — 695,195
5. Bryan Kershaw. Ilkley, West Yorks — 614,189

ARCADIA

1. James Tant, Wokingham, Berks — 657,459
2. Dominik Szewczyk, Sheffield, Yorks — 450,128
3. James Westcott, Wellingborough, Northants — 287,743
4. Roy Pearce, Harwich, Essex — 263,188
5. Neil Morgan, Reading, Berks — 192,795

JETPAC

1. Stephen Flavell, Wolverhampton, West Yorks — 5,607,575
2. J. Denning, Amersham, Bucks — 4,918,595
3. Robert Golding, Hornchurch, Essex — 3,670,180
4. Gareth Green, Basildon, Essex — 3,208,885
5. Paul Alderson, Eastleigh, Hants — 2,174,235

HALL OF FAME

I scored ....

at the game ....

Name ....

Address ....

....

....

Tel: ....

Witness' name ....

....

HALL OF FAME

DJB Software
ATARI 400-800 RENTAL CLUB

Be one of the first to try out the very latest releases. For the most comprehensive selection of the best and most popular games available on cassette and cartridge. Constantly updated.

Also Mail Order.

Send S.A.E. for details to:
D.J.B. SOFTWARE (Dept C.V.G.), 59 WOODLAND AVE, HOVE, SUSSEX. TEL: (0273) 502143.

ATARI 400/800 GAME
PYRAMID

Antic 4 mode graphics. Exciting adventure, explore 50 rooms, open mummy cases. Avoid monsters. On cassette (32k minimum) only £7.95. P.O.s and cheques to:
I.M.J. Software, 12 Wynyard Street, Seaham, Co. Durham SR7 7LT.

MICRO-BYTE SOFTWARE . . . . . . TEXAS TI99/4A

High quality arcade games.

HOP-IT . . . Hop your frog over the busy motorway trying to avoid four lanes of fast moving traffic without getting flattened. To get across the river to the frogs lair you must hop from log to log, but you've got to be sure-footed or you'll end up as a tasty snack for the crocodiles. (Requires Extended basic and joysticks, speech synthesiser optional) Six skill levels, Totaliser. MBO59EB . . . **£4.95**

RI-SKI . . . Speed your way down the ski slopes without coming to grief in the trees or colliding with the flag poles. Can you reach the finish in record time and in one piece? (Requires TI basic, joysticks optional) Four skill levels, Totaliser. MBO32B . . . **£2.95**

NUCLEAR PODS . . . De-activate the alien pods but watch out for the radiation trail. (Requires TI basic) Five skill levels. MPO46B **£2.95**

Many more superb games available, send s.a.e. for full list and details. Post and packing included in price. Cheques and Postal orders to:

MICRO-BYTE SOFTWARE, 11 Saint Mary's Avenue, Purley, Reading, Berkshire, RG8 8BJ.

ATARI 400/800

CARTRIDGE TO TAPE UTILITY
System to back up 8/16k cartridges on to cassette as standard autoboot programs. Requires 48k ram. £15.00.

TAPE TO TAPE UTILITY
Back up single/multistage tapes with short/long inter record gaps. Written in basic so you can see how its done. £6.00.

S. TERRELL, 17 COCK CLOSE ROAD, YAXLEY, PETERBOROUGH PE7 3HJ.

TI99/4A PROGRAMS FROM FORTEX SOFTWARE

TEXAS RANGER (WILD WEST ACTION) — STAR-GATE DEFENDER (SAVE PLANET EARTH), BASIC — HOME BUDGET, MARTIAN MAZE — GOLD RUNNER. ALL AT INTRODUCTORY PRICE **£3.95** EACH INC. OR SEND S.A.E. FOR FULL LIST.

FORTEX SOFTWARE, 71 ST GEORGE LANE NORTH, WORCESTER WR1 1QX.

ATARI 400/800 OWNERS

Vast range of cassette, disc and cartridge software for hire at £2.00 per week. Life membership is £15 (including 1st game hire). To join send £15 cheque/P.O. and list six games in order of preference. Or send S.A.E. for details.
CASTLE GAMES LIBRARY, 44 AUGUSTA CLOSE, ROCHDALE, LANCS. Tel: (0706) 59602.

Wizard Software
ARCADE ACTION

EVICTOR DRAGON 32 and ORIC-1 48k £7.95
ZX SPECTRUM 48k £5.95

An original Arcade game presented in high resolution graphics with machine code for extra zip. Evict the aliens from their self re-generating and defended base. Features lasers, phasors and bombs. 5 skill levels. Dragon 32 and Oric-1 versions feature a demonstration mode.

RECOMMENDED BY THE MICROCOMPUTER SOFTWARE CLUB.

All prices inclusive, mail order, cheques or postal orders to:
WIZARD SOFTWARE, DEPT. CVG, P.O. BOX 23, DUNFERMLINE, FIFE KY11 5RW.

Also available from software retailers in U.K., Europe and Africa. Send large S.A.E. (7in. × 5in.) for full program catalogue. Royalties paid for superior quality DRAGON 32 and ORIC-1 software.

SCOTLAND'S SOFTWARE CENTRE

Softy's Den, 3a York Place, Edinburgh EH1. Tel: 031-556 6472

Over 600 cassettes in stock for most personal micros. Books, joysticks, magazines etc. Get your favourite games, educational and business programs from us at best prices. S.A.E. for price list — state which micro.

ATARI SOFTWARE

Why not play Zaxxon or Preppie all year round at a price you can afford. For latest list of second-hand originals write to: **A. Horton, 5 Ullswater Road, Dewsbury, West Yorkshire WF12 7PS** or phone Dewsbury 463657.

ELKAN ELECTRONICS
LOOK! LOOK!

New! ELKAN TOP-SHOT self centring joystick with *three* firing buttons **£9.95** (+ £1 p&p) for Dragon/Tandy Color/Commodore 64/VIC-20/Atari/Texas/Spectrum (with Interface 2). Buy a pair — p&p is free.

NANOS "quick-reference" cards — easier to use than the manuals!

DRAGON 32 £3.95
COMMODORE 64/VIC-20 £3.95
6502 PROCESSOR £2.95
others, e.g. Apple, Tandy, Sinclair available.
DRAGON'S EYE on/off indicator £3.95
DRAGON'S TAIL joystick extender £2.95

Send cash, cheque, credit card no. to:
ELKAN ELECTRONICS, FREEPOST, 11 Bury New Road, Prestwich, Manchester M25 6LZ. Tel. 061-798 7613. (S.a.e. for full lists/catalogue.)

ATARI 400, 600, 800 OWNERS

REMEMBER. Midland Games Library have approximately 500 games for hire — wide range of cassettes, cartridges, disks and utilities. Write to:
M.G.L., 48 Read Way, Bishops Cleeve, Cheltenham, Glos.
Tel (0242-67) 4960 6pm-9pm

LANCASHIRE MICROS

Sinclair, Commodore, Dragon, Lynx, and Acorn/BBC computers.

We have an extensive range of books and software — over 200 Spectrum titles alone. Send for a free list to:
LANCASHIRE MICROS, 51 QUEEN STREET, MORCAMBE, LANCS. TEL (0524) 411435.

ATARI 400/800 OWNERS

Cassette to Disc Utility. Put as many as 10 of your single load machine code tapes onto one disc. Works with most tapes. Requires 32K (Minimum) + disc. £9.95.

Copy Utility. An advanced copier that copies virtually all basic or machine code, single-load or double-load tapes with either long or short interrecord gaps. Written in machine language. Supplied on Autoboot cassette. £9.95.

Cheques/P.O. to: **W. ENTERPRISES, 49 Shrewley Crescent, Tile Cross, Birmingham B33 0HU.**

NEW STYXFAX for ATARI

A series of inexpensive information sheets full of hints, demo listings and routines to provide the aspiring programmer with a constant source of reference and ideas

Send S.A.E. for details and introductory offer NOW!
STYX SOFTWARE 58 Devon Drive Chandlers Ford Eastleigh Hampshire SO5 3GH

STYX software

CARTRIDGE CITY

for Atari 400/800 rom rentals.
Yearly membership £5.
Rates 20p per day.

Details from:
CARTRIDGE CITY, 25 Gaitside Drive, Aberdeen AB1 7BH. Tel. (0224) 37348.

Timeless Software
Texas TI99/4A

BASIC
T.4 BASIC Gamespack 1 . . . . £4.95
T.5 Othello £4.95
T.6 Toad Graphics £6.95
Othello and Toad Graphics complete with user's manuals

EXTENDED BASIC
T.1 A.B.M. Control*/Cavern Hunt £4.95
T.2 Froglet/Battleships £4.95
T.8 Bouncer* £8.95
T.9 Kong* £8.95

MINI MEMORY
T.10 Kippy's Nightmare £7.95

* = Joysticks required. All prices inc. p&p.
Send SAE for detailed list. Cheques/POs to
Timeless Software, 3 Bridgend, Fauldhouse, W. Lothian EH47 9HF.

ATTENTION ATARI 400/800 USERS

£40 per year or £25 per ½ year allows you to loan up to 50 games of your choice from our extensive library on tape, disk or rom. Free utility tape for new members, send large SAE to; **AMUSEMENTS UNLIMITED, 49 LESLIE CRESCENT, ST. MICHAELS, TENTERDEN, KENT TN30 6BX.**

Tel: (05806) 3830 (evenings)
DISC BACK/UP SERVICE

ATARI 400/800 OWNERS

Why risk losing those precious programs? With our range of utilities you can make a back-up of almost all your software.

KOPY T — tape back-up — £9.95.
KOPY D — tape to disc (up to 10 tapes per disc) — £9.95.
DISCDUPE — Copies full discs including bad sectors — £15.95.
AUTOMENU — Autoboot Basic and Binary discs £12.95.

AWG, 145 Bankside, Westhoughton, Bolton, Lancs.

SPECIAL OFFER for ATARI 400/800 OWNERS

Hire your first 2 games free from our extensive range of software. Up to the minute releases available. Apply now! Send s.a.e. to:
Charnwood Games, 27 Warwick Ave., Quorn, Leics.
Tel: 0509 412604

ATARI 400/800 SOFTWARE

Why spend a fortune on software when you can hire all the very latest released games etc. at a most competitive rate? We have an all-round selection of disks, cassettes and cartridges awaiting your Atari 400/800. Apply now and hire your first 2 games free. For full details send stamped addressed envelope or phone evenings 7pm-10pm or weekends. (0783) 286351.

Games & Software Club, 35 Tilbury Road, Thorney Close, Sunderland SR3 4PB.

SPECTRUM SOFTWARE

SUPER SOFTWARE PACK:— 25 Super programmes for the 48k Spectrum — Machine code arcade type games, adventures, Dungeons & Dragons, Puzzles and ball games including Breakout (taking you through 9 skill levels), Star Wars, Amazing 3D Mazes, 3D Noughts & Crosses, Corridors of Doom, Trap It, Housebreak and Yahtzee. All 25 on one compendium pack. £9.95

Games Pack 1:— Four 'super fast', machine code action games — Specman: gather money bags avoiding the monster and mines. Snake-Byte: Collect eggs on a small island, but be quick or they turn bad, all the time the snake grows longer and moves faster. Also Blitz and Breakout. 16K. £5.95

Games Pack 2:— Two arcade type games and two games of strategy:— War of the Worlds: A task force of 20 aliens is approaching your planet. Each Alien will try to land and build a city. If they are not stopped they will take over and liquidise all resident life forms. Also 3D Noughts & Crosses, Smilies & Battleships. 16K. £5.95

SPECMUNCH:— Pacman at its best, Superior Maze, Intelligent ghosts, Bonus graphical fruit, On screen scoring, smooth animation, great graphics, different levels of difficulty, fruity music and high score. (Machine code of course) 16K. £5.95

BANDIT:— Superior fruit machine with graphical fruit, random hold, each way nudge, gamble feature and realistic spinning reels. (Machine code). 48K. £5.95

Alien Mine:— Your mission: To replenish gold supplies. Dig your paths to the enemy base, watch out for a deadly patrolling robot. There are lazer beams to avoid. A tank attacking your space craft and rock falls to hinder your progress, also many an intrinsic secret to discover. A great arcade adventure game with wonderful graphics. 16K. £5.95

Backgammon:— The computer uses machine code to decide its moves in about five seconds. Plays according to official rules, prevents cheating. Eight colour high resolution board. 48K. £5.95

REVERSI:— An exciting board game of strategy, which is easy to learn but hard to master. Pit your wits against the computer. Standard game or if you dare — lightning reversi. 48K. £5.95

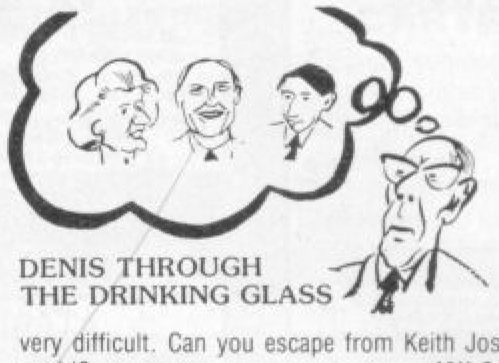
Play as you learn:— Five games pack — 48K Maths, co-ordinates, compass points and the Alphabet are fun to learn with these educational games for the 5-11 year age range. £4.95

ARTY 'The Spectrum Artist':— A very useful aid in the creation of screen displays. This programme will save many hours of planning time. 45 minutes practice to master the commands. All input commands are saved in memory and can be printed out or saved to tape for inclusion in other programmes; or just watch the re-run of all the stages of your creation for fun. 48K. £5.95.

DEALERS ENQUIRIES WELCOME

SPARTAN SOFTWARE,

CVG, 9 Cotswold Terrace, Chipping Norton, Oxon.

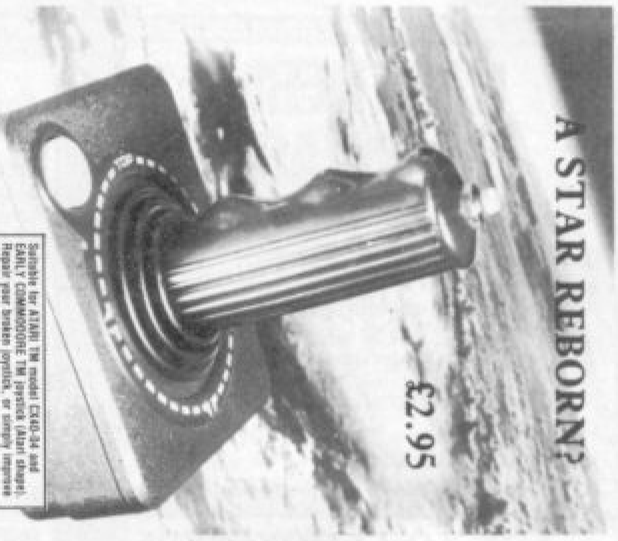


Norman Tebbit, Ken Livingstone, Mary Whitehouse, Robin Day and all the other lovable characters who appear on your screens just before you change channels. This adventure lets you give them what they deserve.

Funny, enigmatic and very difficult. Can you escape from Keith Joseph's monetarist dream-world?

48K Spectrum £5.50 inc. p&p.

APPLICATIONS
Dept. CVG, 8 St Pauls Road,
Peterborough PE1 3DW



Arcade quality replacement handle insert including TOP FIRE BUTTON.

Kit also available for new shape Commodore Vic joystick without insert £1.95

Suitable for ATARI TM model CX40-04 and EARLY COMMODORE TM joystick (Atari shape). Repair your broken joystick, or simply improve the playing quality. Gives dual FIRE CAPABILITY AND LEFT OR RIGHT HAND CONTROL. Fitting instructions enclosed.

COMPUTER SUPPLIES, 146 CHURCH RD., BOSTON, LINCS. TEL.: 50239

TI99/4A PROG PACK 1: 10 arcade strategy and adventure type programs for only £5. T. Wilmott, 3 Somerset Place, Somerset Bridge, Bridgwater, Somerset.

ATOM GAMES. Frogger (6K), Rampage (12K), Q*bert (12K) and many more. £4.95 each or send S.A.E. for details to Plasma Software, 10 Plantation Road, Bangor, Co. Down, N Ireland.

GREAT BARON Atari 800 48K+100 programs + manuals + Basic cartridge + joystick + programme recorder. £325 ono. Tel: 0608 51180 after 1pm any day. Ask for S. Baker.

ATARI 400 16K Basic manuals. Masses of software including Miner 2049er. All worth £350. £200 ono. Plymouth 671575.

ORIC OWNERS: Spelling Bee makes learning fun. Intro Offer: £5.50: Mr Computer, 8, New Street, Sandown, I.O.W.

VIC 20 ASTEROIDS £4. No expansion needed. Send S.A.E. for price list to 6, Littleover Avenue, Hallgreen, Birmingham B28 9HR.

ATARI 400 16K plus Basic, recorder, joysticks, books, magazines and other accessories. Would cost £720, only £350. Birmingham (0675) 70614.

SHARP SOFTWARE MZ80A/K, mostly games, for half original cost. Phone 0532 672534 for details.

ZX-SPECTRUM (48K). Introducing "Bugout" an original arcade style game. Features include five screens of action, amazing voice effects, full colour, sound and whacky user definable graphics, send cheque/PO for £3.50 to Tony Stiles, 20 Montfort Road, Romsey Hants SO5 8SS.

SHARP MZ80/KA. Ten basic and machine code adventures, £1.50 each. 98 Mulgrave Road, Sutton Surrey.

TI99/4A UK user group for beginners. Quarterly newsletter, membership £5 p.a. S.A.E. to 40 Barrhill, Patchman, Brighton BN1 8UF.

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30

Please write your advertisement in the box provided and continue on a separate sheet where necessary.

I enclose an ad. to be placed in the following issues: (state which months);

A TOTAL OF .... WORDS @ 25p EACH = £ ....

Name .... Tel. no. ....

Address ....

....

"MICROSELL", C&VG, 8 HERBAL HILL, LONDON EC1R 5JB.

CONDITIONS

1. All advertisements must be pre-paid (cheques/PO's made payable to COMPUTER & VIDEO GAMES).
2. This section is for PRIVATE advertisers only
3. Minimum of 15 words, maximum of 40 words allowed.
4. COMPUTER & VIDEO GAMES reserve the right not to accept an advertisement.

N.B. Anyone wishing to advertise in the SUPERMARKET section (cost £11 per column cm.) should contact LOUISE FLOCKHART on 01-278 6552.


Any of these games for just
£5.50 EACH
TREAT YOUR SPECTRUM...
MOLAR MAUL
ZIP-ZAP
Ah diddums
Ah Diddums – Be prepared for some hectic and sleepless nights babysitting with this, the cutest most unique and most addictive game for years.
Arcadia – Find out for yourself why Arcadia has become Britain's best selling home computer game, and at the same time blast a few aliens.
Molar Maul – A totally new experience for you. An oral extravaganza, are you the fastest toothbrush in the west? Lots of smiles with this one, and some of them toothless!
ZIP-ZAP – You'll encounter more aliens than you've ever seen before as your runaway droid enters the various domains of ever increasingly intelligent attackers. Heart stopping tension and supersmooth animation.
TREAT YOUR VIC-20...
Wacky Waiters
catcha snatcha
BEWITCHED
Arcadia – Find out for yourself why Arcadia has become Britain's best selling home computer game, and at the same time blast a few aliens.
Bewitched – This is the game that makes Hampton Court maze look an absolute doddle. If you think you know your way around, you're in for a surprise.
Catcha Snatcha – Now you can play your part in cutting the crime rate. But be on your toes, your performance could lead to promotion or the sack!
Wacky Waiters – Take a tip from us, this is the game that makes Fawlty Towers' look sane. A game for everyone, very addictive and very funny.
AND TREAT YOURSELF.
Isn't it about time you treated your computer and yourself to one of Imagine's famous games? There is one to suit everyone, and there is one to suit you. Available now from W. H. Smith, John Menzies, Boots and our nationwide dealer network.
Imagine
..the name of the game
5 Sir Thomas Street
Liverpool, Merseyside L1 6BW
Dealer Enquiries Contact:
Colin Stokes on 051-236 8100 (20 lines)

ADVERTISEMENT INDEX

fantasy SOFTWARE

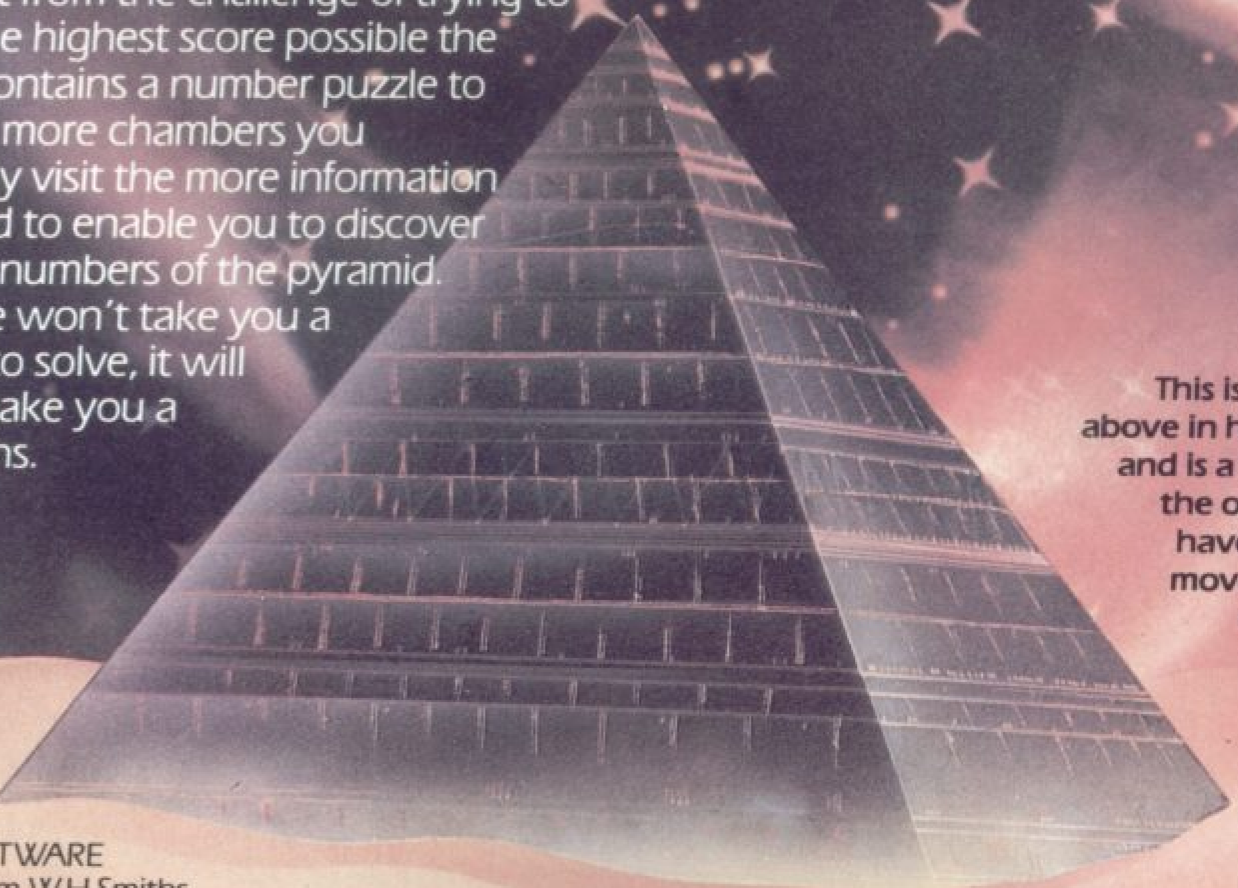
THE PYRAMID is an arcade style game which has a very adventurous feel to it.

The Pyramid contains 120 chambers on 15 levels. In order to get from one chamber to another you must fight off the indigenous aliens to collect an energised crystal which will neutralize the force field guarding the two exits.

The Pyramid is inhabited by a total of 60 wierd and exotic alien types, all of which are beautifully animated. You will meet a whole variety of demons, droids, insects and monsters, with a sprinkling of the more unusual, the extra-terrestrial tweezers, galactic strawberry, cosmic claw, mutant eye, plus a whole host of entities that defy rational description. You will no doubt invent your own nicknames.

You proceed to explore the Pyramid from top to bottom with the difficulty generally increasing with the depth of level. Depending on the choice of exit from each chamber you are likely to have a different game every time you play.

Apart from the challenge of trying to achieve the highest score possible the pyramid contains a number puzzle to solve. The more chambers you successfully visit the more information is gathered to enable you to discover the secret numbers of the pyramid. The puzzle won't take you a few days to solve, it will probably take you a few months.





This is "ZIGGY". He is shown above in his exploratory capsule and is a true representation of the on screen graphics. You have total control over his movements as you explore the many chambers of "THE PYRAMID".

FANTASY SOFTWARE is available from W.H.Smiths, John Menzies and Computers For All

Compatible with all leading joysticks.

THE PYRAMID

For 48K Spectrum

THE PYRAMID is available at £5.50 from
FANTASY SOFTWARE, FAUCONBERG LODGE, 27A ST. GEORGES ROAD, CHELTENHAM, GLOS GL50 3DT
despatched by return first class post together with a membership number entitling you to discount on our forthcoming blockbusting software.

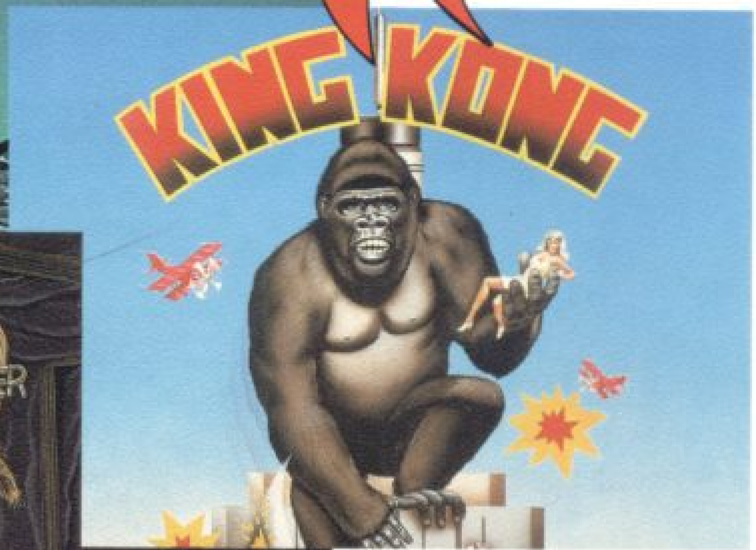
Trade Enquiries welcome – telephone 0242-583661


ocean
NUMBER 1 IN GAMES SOFTWARE
PRESENTS
OUR LATEST BEST SELLER
HUNCHBACK
HELP!
OFFICIALLY LICENCED
ocean
FOR THE 48K SPECTRUM
KONG
RESCUE
FOR THE 48K SPECTRUM
Mr. WIMPY
THE BURGER GAME
ROBOTICS
FOR ANY ZX SPECTRUM
FOR ANY VIC-20
CATERPILLA
RollerBall
FOR ANY ZX SPECTRUM
ARMAGEDDON
FOR THE 48K ORIC
ROAD-FROG
FOR ANY ZX SPECTRUM
DIGGER DAN
DEALERS!
Ocean's dynamite selling range is available from all major distributors.
Phone: 061-832 7049
Officially Licenced by CENTURY ELECTRONICS
Available now for the ZX Spectrum, Commodore 64 and Oric 1
and soon for Dragon 32, Acorn Electron, Atari 400/800
MORE FUN • MORE CHALLENGE • MORE EXCITEMENT
ocean
Ralli Buildings, Stanley Street
Manchester M3 5FD
Ocean software
WOOLWORT
W H SMIT
Boots, John Menzie
selected branches
LASKYS
Department Stores a
all good softwa
dealers. For yo
nearest stock
phone: 061-832 91

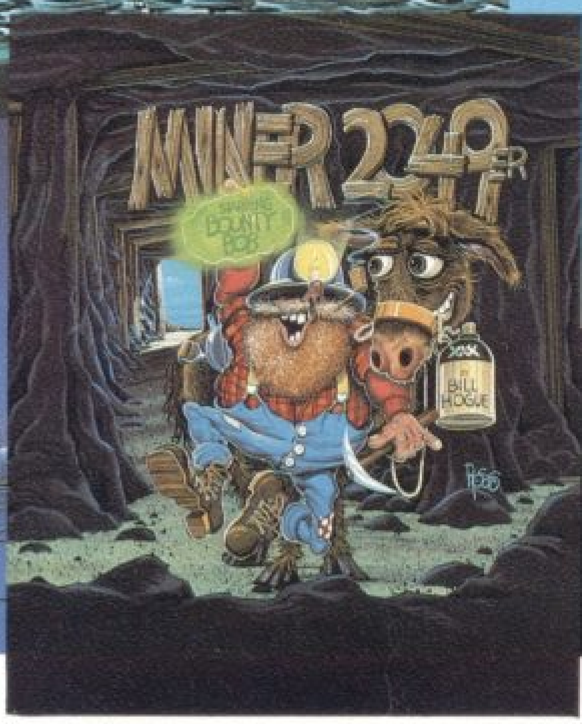
Get ahead – start playing 1984's leading Atari VCS games today





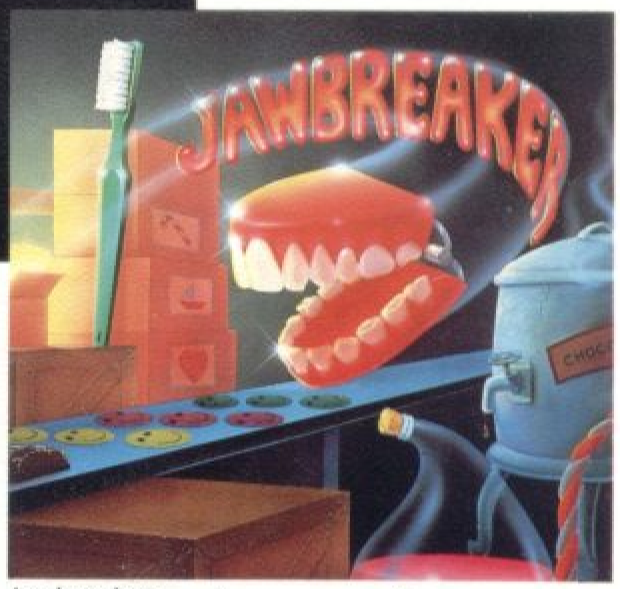


King Kong



Miner 2049'er


Marauder



Jawbreaker

Don't miss this opportunity to get next year's winners now. Whether you're a keen VCS expert or would just like to challenge the family over Christmas there are games for everyone in this brand new selection.

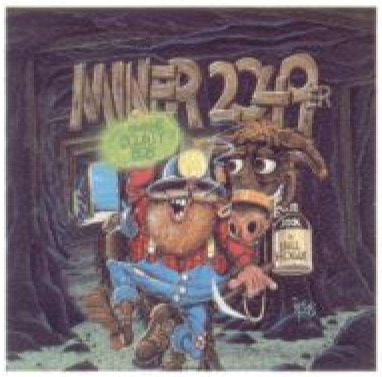
Each action-packed cart has been specially chosen by Prism Microproducts to bring you the very best VCS games at the keenest prices. In fact three of them have already been nominated by the top USA video games magazine, Electronics Games* for 1984 best video game awards.

And if you order now, direct from Prism Microproducts Limited, you can take advantage of our special Christmas offer of the super precision Power-Stick absolutely free (see overleaf for details).

FREE PRISM POWER-STICK OFFER
See over for details



Springer £24.95; tick A



Miner 2049'er £27.95; tick C



Jawbreaker £21.95; tick E

Threshold: Up to ten different space enemies invade your spaceship. You'll need quick reflexes to survive.

Commando Attack: High quality graphic war game where you must fight off rocket firing helicopters and enemy parachutists.

Octopus: Ingenious theme and excellent graphics makes this underwater thriller a family favourite.

Infernal Tower: A firefighting game of strategy and skill where only the quick witted succeed.

Picnic: Protect your food from the pesky insects.

Gopher: If your flower patch is to stay intact you must thwart the artful gopher.

Springer: is a magical friendly rabbit with a mighty kick in this hit-arcade chase game.

***Polaris:** Submarine missiles must fight off squadrons of attacking aircraft in this 'multiple screen' confrontation.

***Miner 2049'er:** 'Bounty Bob' is mining a radio-active mine in the year 2049. He must avoid deadly mutant organisms in his quest to 'claim' all of the stations.

King Kong: Save the maiden against all the odds from King Kong's clutches.

Marauder: Fight off Alien robots to get through the 6 different mazes and recapture the cosmic treasure.

Jawbreaker: Novel Pacman like game with its own crazy qualities as a chomping set of teeth set to work on cleaning out a not so friendly sweet factory.

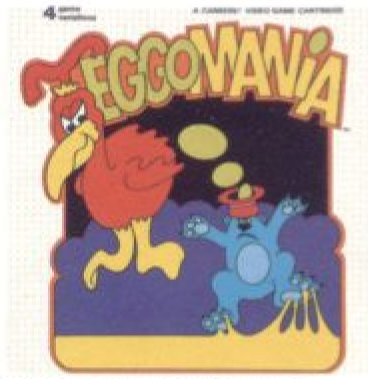
***Eggomania:** Defend yourself from bombardment by strange coloured eggs. A game of skill with drastic consequences for those who fail.



King Kong £21.95; tick B



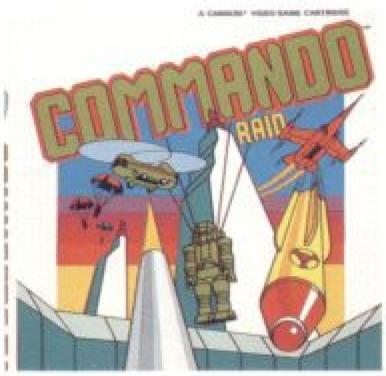
Threshold £21.95; tick D



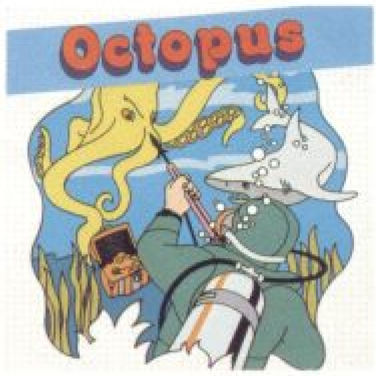
Eggomania £17.95; tick F



Marauder £21.95; tick G



Commando Attack £17.95; tick H



Octopus £17.95; tick I



Infernal Tower £15.95; tick J

SPECIAL OFFER



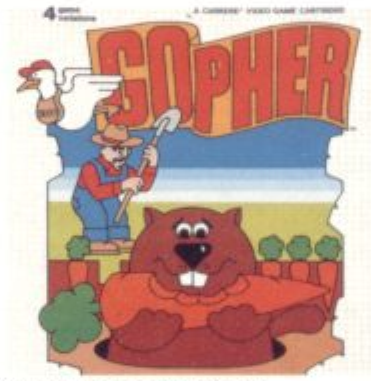
order 3 or more cartridges now and you get this new super precision power-stick absolutely **FREE**



Polaris £27.95; tick K



Picnic £15.95; tick L



Gopher £15.95; tick M

Fill in the coupon and tick the box/boxes provided for the carts you require. If you are ordering three or more and would like a Power Stick tick this box as well. Power Stick ☐ Please send me the following Atari VCS cartridges right away.

☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☐ J ☐ K ☐ L ☐ M

NAME ______________________ ADDRESS ______________________

____

______________________ TELEPHONE ______________________

I am enclosing a cheque for £ (includes VAT and Postage and Packing) made payable to Prism Microproducts Limited. If you require an invoice please tick ☐

PRISM

Prism Microproducts Ltd
Prism House, 18/29 Mora Street
City Road, London EC1V 8BT
Telephone: 01-253 2277
Telex: 21439 PRISM G

Please allow 28 days for delivery. Registered in England no. 1478024.